

GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: October 26, 2004, 07:25:28 ; Search time 158 Seconds  
(without alignments)  
45.409 Million cell updates/sec

Title: US-10-619-910-11  
Perfect score: 111  
Sequence: 1 INPETYRPPCCAPQLNLAIS 20

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 2002273 seqs, 358729299 residues

Total number of hits satisfying chosen parameters: 2002273

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%

Listing first 200 summaries

Database :  
1: Geneseqp23Sep04:\*  
2: geneseqp1980s:\*  
3: geneseqp1990s:\*  
4: geneseqp2000s:\*  
5: geneseqp2001s:\*  
6: geneseqp2002s:\*  
7: geneseqp2003as:\*  
8: geneseqp2003bs:\*  
8: geneseqp2004s:\*

Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	111	100.0	20	3	AAV93365 Amino act
2	111	100.0	97	2	AAW53359 Osteogeni
3	111	100.0	97	2	AAW89696 Human ost
4	111	100.0	97	2	AAW95444 Conserved
5	111	100.0	98	1	AAW95681 Human ost
6	111	100.0	102	1	AAW95682 Human ost
7	111	100.0	102	1	AAW53360 Osteogeni
8	111	100.0	102	2	AAW36897 Human ost
9	111	100.0	102	2	AAW36889 Human ost
10	111	100.0	102	2	AAW36872 Human ost
11	111	100.0	102	2	AAW16708 WO9914235
12	111	100.0	102	2	AAW89697 Human ost
13	111	100.0	102	2	AAW95443 Conserved
14	111	100.0	102	3	AAV92569 OP-1 fing
15	111	100.0	102	3	AAW03534 Human OP-
16	111	100.0	102	3	AAW02800 Human OP-
17	111	100.0	102	4	AAU10599 Human ost
18	111	100.0	102	5	AAW76281 Mature hu
19	111	100.0	102	8	ADG14142 Human ost
20	111	100.0	102	8	ADW36196 Transform
21	111	100.0	111	2	AAV92027 Human bon
22	111	100.0	114	2	AAW53361 N-termina
23	111	100.0	114	2	AAW95454 N-termina
24	111	100.0	116	2	AAW53362 N-termina
25	111	100.0	116	2	AAW95453 N-termina

26	111	100.0	117	2	AAW53363 N-termina
27	111	100.0	117	2	AAW95452 N-termina
28	111	100.0	117	3	AAV92595 Trypsin t
29	111	100.0	117	3	AAW09548 Trypsin t
30	111	100.0	117	3	AAW02814 Human try
31	111	100.0	119	2	AAW53364 N-termina
32	111	100.0	119	2	AAW95451 N-termina
33	111	100.0	119	6	ABG76026 Human OP-
34	111	100.0	131	5	ABW07963 Human BMP
35	111	100.0	132	2	AAW53365 N-termina
36	111	100.0	132	2	AAW95450 N-termina
37	111	100.0	138	2	AAW08297 Human gro
38	111	100.0	139	2	AAW23187 Osteogeni
39	111	100.0	139	2	AAW27285 Mature hu
40	111	100.0	139	2	AAW53366 N-termina
41	111	100.0	139	2	AAW33921 Morphogen
42	111	100.0	139	2	AAW33398 Human mat
43	111	100.0	139	2	AAW31467 Mature P3
44	111	100.0	139	2	AAW46724 Human mat
45	111	100.0	139	2	AAW60967 Mature hu
46	111	100.0	139	2	AAW71974 BMP-7, 10
47	111	100.0	139	2	AAW00222 Mouse mat
48	111	100.0	139	2	AAW00221 Human mat
49	111	100.0	139	2	AAW40180 Human top
50	111	100.0	139	2	AAW36871 Mature pr
51	111	100.0	139	2	AAW54064 Bone morph
52	111	100.0	139	2	AAW84215 Bone morph
53	111	100.0	139	2	AAW95449 Mature hu
54	111	100.0	139	3	AAW70755 Mature mo
55	111	100.0	139	3	AAW92594 Mature mu
56	111	100.0	139	3	AAW09547 Mature OP
57	111	100.0	139	3	AAW57218 Human ost
58	111	100.0	139	3	AAW02813 Human mat
59	111	100.0	139	5	AAW51924 Human TGF
60	111	100.0	139	7	ADM04098 Human pro
61	111	100.0	139	8	ADH11607 Human bon
62	111	100.0	139	8	ADK90626 Human ost
63	111	100.0	141	8	ADK72628 rh BMP-7
64	111	100.0	161	2	AAW29285 Human ost
65	111	100.0	161	3	AAW18757 Subunit D
66	111	100.0	169	2	AAW44749 Osteogeni
67	111	100.0	169	2	AAW85765 OP1A fusi
68	111	100.0	169	2	AAW44305 Human ost
69	111	100.0	169	2	AAW89682 Osteogeni
70	111	100.0	169	2	AAW43316 Osteogeni
71	111	100.0	169	7	ADJ62684 Human ost
72	111	100.0	169	8	ADW52755 Human ost
73	111	100.0	179	8	ADW80493 Human ost
74	111	100.0	178	3	AAW18759 FUSION OF
75	111	100.0	179	2	AAW29297 FUSION OF
76	111	100.0	179	2	AAW29298 FUSION OF
77	111	100.0	179	2	AAW29289 FUSION OF
78	111	100.0	179	2	AAW29301 FUSION OF
79	111	100.0	179	2	AAW29286 FUSION OF
80	111	100.0	190	3	AAW18761 FUSION OF
81	111	100.0	194	2	AAW29304 BPI pepri
82	111	100.0	195	2	AAW29302 BPI pepri
83	111	100.0	317	2	AAW51656 Osteogeni
84	111	100.0	317	2	AAW85766 OP1B fusi
85	111	100.0	317	2	AAW44306 Human ost
86	111	100.0	317	2	AAW95683 Osteogeni
87	111	100.0	317	2	AAW43317 Osteogeni
88	111	100.0	317	7	ADJ62686 Human ost
89	111	100.0	317	8	ADW52757 Human ost
90	111	100.0	317	8	ADW80495 Human ost
91	111	100.0	365	8	ADW05621 Human EXM
92	111	100.0	408	2	AAW44752 Osteogeni
93	111	100.0	408	2	AAW51658 Osteogeni
94	111	100.0	408	2	AAW85768 OP1D fusi
95	111	100.0	408	2	AAW44308 Human ost
96	111	100.0	408	2	AAW95685 Osteogeni
97	111	100.0	408	2	AAW43319 Osteogeni
98	111	100.0	408	7	ADJ62680 Human ost

99	111	100.0	408	8	ADBS761	Adbs761 Human ost
100	111	100.0	408	8	ADBS8499	Adbs8499 Human ost
101	111	100.0	431	2	AA07335	AA07335 Human Bon
102	111	100.0	431	2	AA07335	AA07335 Human Bon
103	111	100.0	431	2	AA07335	AA07335 Human Bon
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105	111	100.0	431	2	AA07335	AA07335 Human Bon
106	111	100.0	431	2	AA07335	AA07335 Human Bon
107	111	100.0	431	2	AA07335	AA07335 Human Bon
108	111	100.0	431	2	AA07335	AA07335 Human Bon
109	111	100.0	431	2	AA07335	AA07335 Human Bon
110	111	100.0	431	2	AA07335	AA07335 Human Bon
111	111	100.0	431	2	AA07335	AA07335 Human Bon
112	111	100.0	431	2	AA07335	AA07335 Human Bon
113	111	100.0	431	2	AA07335	AA07335 Human Bon
114	111	100.0	431	2	AA07335	AA07335 Human Bon
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119	111	100.0	431	2	AA07335	AA07335 Human Bon
120	111	100.0	431	2	AA07335	AA07335 Human Bon
121	111	100.0	431	2	AA07335	AA07335 Human Bon
122	111	100.0	431	2	AA07335	AA07335 Human Bon
123	111	100.0	431	2	AA07335	AA07335 Human Bon
124	111	100.0	431	2	AA07335	AA07335 Human Bon
125	111	100.0	431	2	AA07335	AA07335 Human Bon
126	111	100.0	431	2	AA07335	AA07335 Human Bon
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130	111	100.0	431	2	AA07335	AA07335 Human Bon
131	111	100.0	431	2	AA07335	AA07335 Human Bon
132	111	100.0	431	2	AA07335	AA07335 Human Bon
133	111	100.0	431	2	AA07335	AA07335 Human Bon
134	111	100.0	431	2	AA07335	AA07335 Human Bon
135	111	100.0	431	2	AA07335	AA07335 Human Bon
136	111	100.0	431	2	AA07335	AA07335 Human Bon
137	111	100.0	431	2	AA07335	AA07335 Human Bon
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139	111	100.0	431	2	AA07335	AA07335 Human Bon
140	111	100.0	431	2	AA07335	AA07335 Human Bon
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142	111	100.0	431	2	AA07335	AA07335 Human Bon
143	111	100.0	431	2	AA07335	AA07335 Human Bon
144	111	100.0	431	2	AA07335	AA07335 Human Bon
145	111	100.0	431	2	AA07335	AA07335 Human Bon
146	111	100.0	431	2	AA07335	AA07335 Human Bon
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149	111	100.0	431	2	AA07335	AA07335 Human Bon
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156	111	100.0	431	2	AA07335	AA07335 Human Bon
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168	111	100.0	431	2	AA07335	AA07335 Human Bon
169	111	100.0	431	2	AA07335	AA07335 Human Bon
170	111	100.0	431	2	AA07335	AA07335 Human Bon
171	111	100.0	431	2	AA07335	AA07335 Human Bon

172	111	100.0	431	4	AA02695	AA02695 Human ost
173	111	100.0	431	5	AA097017	AA097017 Human ost
174	111	100.0	431	5	AA02593	AA02593 Human ost
175	111	100.0	431	5	AA082416	AA082416 Human ost
176	111	100.0	431	6	AA056730	AA056730 Lung canc
177	111	100.0	431	6	AA044022	AA044022 Human ost
178	111	100.0	431	6	AA063427	AA063427 Human ost
179	111	100.0	431	7	AA061634	AA061634 Human ost
180	111	100.0	431	7	AA062827	AA062827 Human ost
181	111	100.0	431	7	AA080494	AA080494 Ovarian c
182	111	100.0	431	7	AA000788	AA000788 Human ost
183	111	100.0	431	7	AD139797	AD139797 Human ost
184	111	100.0	431	7	AD062877	AD062877 Human ost
185	111	100.0	431	7	ADN39200	ADN39200 Cancer/an
186	111	100.0	431	7	ADN39469	ADN39469 Cancer/an
187	111	100.0	431	7	ADN39488	ADN39488 Cancer/an
188	111	100.0	431	7	ADN39525	ADN39525 Cancer/an
189	111	100.0	431	7	AD052748	AD052748 Human ost
190	111	100.0	431	8	ADH11584	ADH11584 Human bon
191	111	100.0	431	8	ADH17316	ADH17316 Human NOV
192	111	100.0	431	8	AD125169	AD125169 Human ost
193	111	100.0	431	8	ADH80486	ADH80486 Human ost
194	111	100.0	431	8	ADK90628	ADK90628 Human ost
195	111	100.0	431	8	ADN32623	ADN32623 Prepro fo
196	111	100.0	431	8	AD036195	AD036195 Human tra
197	111	100.0	431	8	AD049073	AD049073 Human tra
198	111	100.0	431	8	AD07965	AD07965 Human fib
199	111	100.0	484	5	AA044751	AA044751 Osteogeni
200	111	100.0	484	2	AA051657	AA051657 Osteogeni

## ALIGNMENTS

RESULT 1  
 ID AA093365 standard; peptide; 20 AA.  
 AC AA093365;  
 DT 04-SEP-2000 (first entry)  
 DE Amino acid sequence of an osteogenic peptide.  
 KW Osteogenic peptide; alkaline phosphatase; osteoblast; neogenic bone;  
 KW bone growth; bone fracture; rheumatoid arthritis; osteoporosis;  
 KW peridontic disease; bone filler; bone substance.  
 OS Synthetic.  
 PN EP1006126-A2.  
 PD 07-JUN-2000.  
 XX  
 XX 12-NOV-1999; 99EP-00402815.  
 XX 12-NOV-1998; 98JP-00322075.  
 PA (NISHI) NISHIMURA Y.  
 PA (SUZU) SUZUKI Y.  
 PA (TANI) TANIHARA M.  
 PA (KYOC) KYOCERA CORP.  
 PI Nishimura Y, Suzuki Y, Tanihara M;  
 DR WPI; 2000-367955/32.  
 PT Novel osteogenic peptides useful for the treatment and prevention of  
 PT fractures.  
 PS Claim 2; Page 22; 22pp; English.  
 CC The present sequence represents an osteogenic peptide. The peptide



CC accelerates the activation of alkaline phosphatase in osteoblasts to form  
CC neogenetic bone or induces growth of existing bone. The peptide may be  
CC used to prevent or treat bone fractures caused by rheumatoid arthritis  
CC and osteoporosis, as well as for treating periodontic diseases. The  
CC peptide is also useful as a filler in deficient sites of bone, and for  
CC inhibition of decrease in bone substance. The peptides of the invention  
CC are negligible in cytotoxicity and systemic acute toxicity  
XX  
SQ Sequence 20 AA;

Query Match 100.0%; Score 111; DB 3; Length 20;  
Best Local Similarity 100.0%; Pred. No. 9.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTOLNAIS 20  
DB 1 INPETHKPCCAPTOLNAIS 20

RESULT 2  
AAR53359  
ID AAR53359 standard; protein; 97 AA.  
XX  
AC AAR53359;

XX 25-MAR-2003 (revised)  
DT 01-JUL-2002 (revised)  
DT 06-JUN-1994 (first entry)  
XX

DE Osteogenic protein OP.

XX Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;  
KM vascularisation; mineralisation; differentiation.  
XX  
OS Homo sapiens.

XX US5266683-A.

XX 30-NOV-1993.

XX 21-FEB-1992;

XX 92US-00841646.

XX 08-APR-1988;

XX 15-AUG-1988;

XX 23-FEB-1989;

XX 17-OCT-1989;

XX 17-OCT-1989;

XX 22-FEB-1990;

XX 20-AUG-1990;

XX 07-SEP-1990;

XX 18-OCT-1990;

XX 21-NOV-1990;

XX 04-DEC-1990;

XX 22-FEB-1991;

XX 20-DEC-1991;

XX 28-JAN-1992;

XX 92US-00827052.

XX (STYC ) STRYKER CORP.

XX Kuberasesampath T, Ozkaynak E, Rueger DC, Pang RHL, Oppermann H;

XX WPI; 1993-395405/49.

XX N-PSDB; AAQ53141.

XX New pure mammalian osteogenic proteins - induce cartilage and

XX Claim 6; Col 69-72; 128pp; English.

XX This sequence is a fragment of the osteogenic protein OP1 and is

XX designated OPS (The S is for "Short"). The 97 amino acid C-terminal

CC region of OP1 which is the functional domain of OP1 is present in this  
CC fragment. The osteogenic protein when in association with a matrix can  
CC induce at the locus of an implant the full development cascade of  
CC endochondral bone formation including vascularisation, mineralisation and  
CC bone marrow differentiation. The osteogenic protein can also be used to  
CC repair both bone and cartilage in the treatment of osteoarthritis.  
CC (Updated on 01-JUN-2002 to add missing PA field.) (Updated on 25-MAR-2003  
CC to correct PF field.) (Updated on 25-MAR-2003 to correct PR field.)  
XX  
SQ Sequence 97 AA;

Query Match 100.0%; Score 111; DB 2; Length 97;  
Best Local Similarity 100.0%; Pred. No. 4.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTOLNAIS 20  
DB 52 INPETHKPCCAPTOLNAIS 71

RESULT 3  
AAW89696  
ID AAW89696 standard; peptide; 97 AA.  
XX  
AC AAW89696;

XX 20-MAR-2003 (revised)  
DT 24-MAR-1999 (first entry)  
XX

DE Human osteogenic protein OP-1 fragment 335-431.

XX Human; osteogenic protein; OP-1; OPX; endochondral bone formation;  
KM cartilage; craniofacial defect; skeletal disorder; dental disorder;  
XX non-union fracture; osteoarthritis; vascularisation; mineralisation;  
XX bone marrow differentiation.

XX Homo sapiens.

XX US5863758-A.

XX 26-JAN-1999.

XX 23-MAY-1995;

XX 95US-00449700.

XX 08-APR-1988;

XX 15-AUG-1988;

XX 23-FEB-1989;

XX 17-OCT-1989;

XX 17-OCT-1989;

XX 22-FEB-1990;

XX 20-AUG-1990;

XX 07-SEP-1990;

XX 18-OCT-1990;

XX 21-NOV-1990;

XX 04-DEC-1990;

XX 22-FEB-1991;

XX 20-DEC-1991;

XX 28-JAN-1992;

XX 01-NOV-1993;

XX (STYC ) STRYKER CORP.

XX Kuberasesampath T, Rueger DC, Kuberasesampath T, Oppermann H, Ozkaynak E;

XX WPI; 1999-131303/11.

XX Nucleic acid encoding mammalian osteogenic proteins in prepro form - able

XX to induce cartilage and bone formation when implanted in matrix, useful

XX for repairing bone defects.

PS Claim 10; Col 151; 127pp; English.

XX The present invention describes isolated DNA (I) encoding at least one  
 CC osteogenically active region of human osteogenic protein-1 in prepro form  
 CC (OP1-PP), murine OP1-PP, murine OP2-PP or human OP2-PP. Also described  
 CC are: (A) DNA related to (I) encoding a polypeptide able to form dimers  
 CC that can induce cartilage and endochondral bone formation in a mammal  
 CC when implanted in a matrix; (B) vectors containing (I) or related DNA;  
 CC (C) host cells transformed with this vector; (D) DNA (I') encoding a  
 CC prepro- or pro-OP1, and related vectors of transformed mammalian  
 CC osteogenic protein (II) produced by expression of transformed mammalian  
 CC cells, able to induce bone and cartilage formation; (F) mature OP1  
 CC secreted from mammalian cells following expression of the sequence that  
 CC encodes hOP1-PP; and (G) production of an active osteogenic composition  
 CC by truncating mature OP1 protein. Host cells of (C) are used to produce  
 CC proteins able to induce cartilage and bone formation, e.g. for correction  
 CC of acquired or congenital craniofacial defects or other skeletal or  
 CC dental disorders; or to heal non-union fractures; to repair cartilage, e.g.  
 CC in osteoarthritis, or generally wherever bone formation is required. The  
 CC proteins induce complete development of endochondral bone, including  
 CC vascularisation, mineralisation and bone marrow differentiation. The  
 CC present sequence represents a human OP1 fragment. (Updated on 20-MAR-2003  
 CC to correct 2A field.)

XX Sequence 97 AA;

SO Query Match 100.0%; Score 111; DB 2; Length 97;  
 Best Local Similarity 100.0%; Pred. No. 4.3e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTQLNLAIS 20  
 |||||  
 DB 52 INPETHKPCCAPTQLNLAIS 71

RESULT 4  
 AAW95444  
 ID AAW95444 standard; protein; 97 AA.

XX AAW95444;

XX 26-MAR-1999 (first entry)

DE Conserved 6 cysteine skeleton fragment from human OP1.

XX Cystic kidney disease; renal; therapeutic; osteogenic protein; OP;  
 KW bone morphogenic protein; BMP; growth factor-beta superfamily;  
 KW polycystic kidney disease; multicystic dysplastic kidney disease;  
 KW ureamic medullary cystic disease; human.

XX Homo sapiens.

OS WO9850061-A1.

XX 12-NOV-1998.

PD 06-MAY-1998; 98WO-US009268.

XX 07-MAY-1997; 97US-0045909P.

XX (BIOJ) BIOGEN INC.

XX GJorstrup P, Harris R;

PI WPI; 1999-070084/06.

XX Treating cystic kidney disease - using renal therapeutic agents or  
 PT sequences encoding them, especially from the osteogenic protein/bone  
 PT morphogenic protein family.

XX Claim 3; Page 5-6; 67pp; English.

CC The invention relates to methods for treating cystic kidney diseases. The

CC method comprises administering an effective amount of a renal therapeutic  
 CC agent or a polynucleotide encoding the therapeutic agent. The therapeutic  
 CC agent is preferably a soluble or membrane bound polypeptide, e.g. a  
 CC member of the osteogenic protein/bone morphogenic protein (Op/BMP) family  
 CC within a transforming growth factor-beta superfamily of proteins. It is  
 CC especially one of the polypeptides hOP1, hOP1-PP, OP1-18Ser, OP5, OP7,  
 CC OP1-16Ser, OP1-16Ileu, OP1-16Met, OP1-16Ala, OP1-16Val, hOP1-PP,  
 CC hOP2, hOP2-PP, hOP2-1Ala, hOP2-Pro, hOP2-Arg, or hOP2-Ser or their  
 CC biologically active homologues. The method is used to treat humans  
 CC having, or at risk of, cystic kidney disease, e.g. autosomal recessive  
 CC (infantile) polycystic disease, multicystic dysplastic kidney disease,  
 CC uraemic medullary cystic disease, and autosomal dominant polycystic  
 CC kidney disease. The present sequence represents a human osteogenic  
 CC protein 1 (OP1) species defining the conserved 6 cysteine skeleton in  
 CC the active region

XX Sequence 97 AA;

SO Query Match 100.0%; Score 111; DB 2; Length 97;  
 Best Local Similarity 100.0%; Pred. No. 4.3e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTQLNLAIS 20  
 |||||  
 DB 52 INPETHKPCCAPTQLNLAIS 71

RESULT 5  
 AAP95681  
 ID AAP95681 standard; protein; 98 AA.

XX AAP95681;

XX 25-MAR-2003 (revised)

DT 21-AUG-1990 (first entry)

DE Human osteogenic protein 1(OP1-1) for osteogenic device.

XX Osteogenic device; osteogenic protein; endochondral bone;  
 KW biodegradable matrix.

XX Synthetic.

OS WO8909788-A.

XX 19-OCT-1989.

PD 08-APR-1988; 88US-00179406.

XX 08-APR-1988; 88US-00179406.

PR 15-AUG-1988; 88US-00232630.

PR 23-FEB-1989; 89US-00315342.

PR 07-APR-1989; 89WO-US001469.

XX (CREA-) CREATIVE BIOMOLECULES INC.

XX Opfermann H, Kuberassamp T, Rueger D;

PI WPI; 1989-324203/44.

XX Osteogenic devices comprising matrix contg. osteogenic proteins - prepd.  
 PT by recombinant techniques.

XX Claim 9; Page 48; 69pp; English.

XX The protein is capable of inducing endochondral bone formation in  
 CC association with a biocompatible, in vitro biodegradable matrix. The  
 CC protein is produced by expression of the recombinant DNA in a host cell  
 CC and comprises more than one polypeptide chain, with an amino acid  
 CC sequence sufficiently duplicative of COP5, COP7, COP16 or OP1. The  
 CC protein and the implantable devices enable optimal predictable bone  
 CC formation. Clinical applications include correction of acquired and  
 CC congenital craniofacial and other skeletal or dental anomalies, induction

CC of local endochondral bone formation in non-union fractures, periodontal  
 CC applics. requiring bone formation and cartilage repair, eg in the  
 CC treatment of osteoarthritis. See also AAP95679-P95692 and AAN95097.  
 CC (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-2003 to  
 CC correct PA field.)  
 XX  
 SO Sequence 98 AA;

Query Match 100.0%; Score 111; DB 1; Length 98;  
 Best Local Similarity 100.0%; Pred. No. 4.4e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 INPETHKPCAPQTLNNAIS 20  
 53 INPETHKPCAPQTLNNAIS 72

# RESULT 6

AAP95682 standard; protein; 102 AA.

AC AAP95682;

DT 25-MAR-2003 (revised)

DT 21-AUG-1990 (first entry)

DE Human osteogenic protein 1(OP1-II) for osteogenic device.

KW Osteogenic device; osteogenic protein; endochondral bone;  
 biodegradable matrix.

OS Synthetic.

PN WO8909788-A.

PD 19-OCT-1989.

PF 08-APR-1988; 88US-00179406.

PR 08-APR-1988; 88US-00179406.

PR 15-AUG-1988; 88US-00232630.

PR 23-FEB-1989; 89US-00315342.

PR 07-APR-1989; 89WO-US001469.

PA (CREA-) CREATIVE BIOMOLECULES INC.

PI Oppermann H, Kuberassamp T, Rueger D;

XX WPI; 1989-324203/44.

PT Osteogenic devices comprising matrix contg. osteogenic proteins - prepd.  
 by recombinant techniques.

PS Claim 10; Page 49; 69pp; English.

XX The protein is capable of inducing endochronal bone formation in  
 CC association with a biocompatible, in vivo biodegradable matrix. The  
 CC protein is produced by expression of the recombinant DNA in a host cell  
 CC and comprises more than one polypeptide chain, with an amino acid  
 CC sequence sufficiently duplicative of COP5, COP7, COP16 or OPI. The  
 CC protein and the implantable devices enable optimal predictable bone  
 CC formation. Clinical applications include correction of acquired and  
 CC congenital craniofacial and other skeletal or dental anomalies, induction  
 CC of local endochondral bone formation in non-union fractures, periodontal  
 CC applics. requiring bone formation and cartilage repair, eg in the  
 CC treatment of osteoarthritis. See also AAP95679-P95692 and AAN95097.  
 CC (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-2003 to  
 CC correct PA field.)  
 XX  
 SO Sequence 102 AA;

Query Match 100.0%; Score 111; DB 1; Length 102;  
 Best Local Similarity 100.0%; Pred. No. 4.5e-07;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 INPETHKPCAPQTLNNAIS 20  
 57 INPETHKPCAPQTLNNAIS 76

# RESULT 7

AAR53360 standard; protein; 102 AA.

AC AAR53360;

DT 25-MAR-2003 (revised)

DT 01-JUL-2002 (revised)

DT 06-JUN-1994 (first entry)

DE Osteogenic protein OP7.

KW Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;  
 vascularisation; mineralisation; differentiation.

OS Homo sapiens.

PN US5266683-A.

PD 30-NOV-1993.

PF 21-FEB-1992; 92US-00841646.

PR 08-APR-1988; 88US-00179406.

PR 15-AUG-1988; 88US-00232630.

PR 23-FEB-1989; 89US-00315342.

PR 17-OCT-1989; 89US-00422613.

PR 17-OCT-1989; 89US-00422699.

PR 22-FEB-1990; 90US-00483913.

PR 20-AUG-1990; 90US-00569920.

PR 07-SEP-1990; 90US-00579865.

PR 18-OCT-1990; 90US-00599543.

PR 21-NOV-1990; 90US-00600024.

PR 04-DEC-1990; 90US-00616374.

PR 04-DEC-1990; 90US-00621988.

PR 22-FEB-1991; 91US-00660162.

PR 20-DEC-1991; 91US-00810560.

PR 28-JAN-1992; 92US-00827052.

PA (STYC) STRYKER CORP.

PI Kuberassampath T, Ozkaynak E, Rueger DC, Pang RHL, Oppermann H;

XX WPI; 1993-395405/49.

DR N-PSDB; AAO53141.

PT New pure mammalian osteogenic proteins - induce cartilage and  
 endochondral bone formation when in association with a matrix.

PS Claim 7; Col 69-72; 128pp; English.

XX This sequence is a fragment of the osteogenic protein OPI and is  
 CC designated OP7. The sequence is a 102 C-terminal region and functional  
 CC domain of OPI. The osteogenic protein when in association with a matrix  
 CC can induce at the locus of an implant the full development cascade of  
 CC endochondral bone formation including vascularisation, mineralisation and  
 CC bone marrow differentiation. The osteogenic protein can also be used to  
 CC repair both bone and cartilage in the treatment of osteoarthritis.  
 CC (Updated on 01-JUL-2002 to add missing PA field.) (Updated on 25-MAR-2003  
 CC to correct PF field.) (Updated on 25-MAR-2003 to correct PR field.)  
 XX  
 SO Sequence 102 AA;

Query Match 100.0%; Score 111; DB 2; Length 102;  
 Best Local Similarity 100.0%; Pred. No. 4.5e-07;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTOLNAIS 20  
 DB 57 INPETHKPCCAPTOLNAIS 76

RESULT 8  
 AAM36897  
 ID AAM36897 standard; protein; 102 AA.

AC AAM36897;

DT 12-MAR-1998 (first entry)

DE Mutant human osteogenic protein 1 with enhanced solubility.

KM Human osteogenic protein-1; hOP-1; OP-1; morphogen; morphogenic protein;

KW tissue-specific morphogenesis; 3-D structure; morphogenic analogue;

KM therapeutic agent; diseased tissue regeneration; osteoporosis;

XX bone-remodelling disease.

OS Synthetic.

OS Homo sapiens.

XX Key

FT Disulfide-bond 1..66 Location/Qualifiers

FT /note= "corresponds to residues 38 and 104 of the mature

FT protein"

FT Region

FT /note= "region designated Finger 1"

FT Misc-difference 26

FT /note= "wild type Ala63 is replaced with Ser"

FT Disulfide-bond 30..99

FT /note= "corresponds to residues 67 and 136 of the mature

FT protein"

FT Disulfide-bond 34..101

FT /note= "corresponds to residues 71 and 138 of the mature

FT protein"

FT Region

FT /note= "region designated Heel"

FT Region

FT /note= "region designated Finger 2"

FT W09726277-A2.

PD 24-JUL-1997.

PF 22-JAN-1997; 97WO-US001071.

PR 22-JAN-1996; 96US-00589552.

XX (CREA-) CREATIVE BIOMOLECULES INC.

PA (UYBR-) UNIV BRANDERS.

XX Keck P, Griffith DL, Carlson WD, Rueger DC, Sampath KT;

XX WPI; 1997-385296/35.

DR 24-JUL-1997.

XX Computer system containing crystallographic coordinates of human

PT osteogenic protein-1 - used for design of analogues with agonist

PT activity, potentially useful for treating osteoporosis etc.

XX Disclosure; Page; 176pp; English.

XX The present sequence represents a mutant human osteogenic protein-1 (hOP-

CC 1). OP-1 proteins are a group of morphogenetically active proteins.

CC Morphogens are inactive when reduced, but are active as oxidized

CC homodimers and when oxidized with other morphogens. Morphogenic proteins

CC such as OP-1 play an important role, not only in embryogenesis, but also

CC in tissue and organ maintenance and repair in mammals. They induce a

CC developmental cascade of tissue-specific morphogenesis in a mammal. This

CC mutant has had Ala63 replaced with Ser to enhance the solubility of the

CC homodimer. Ala63 was identified as a potential mutation site using a  
 CC novel computer system. The system comprises a memory containing atomic X-  
 CC ray crystallographic coordinates defining at least part of hOP-1, and a  
 CC processor able to generate a molecular model having the three-dimensional  
 CC shape representative of at least part of hOP-1. Morphogenic analogues  
 CC with hOP-1 like activity can also be identified using this system.  
 CC Typical applications of the therapeutic agents identified are in  
 CC proliferation of progenitor cells and regeneration of damaged or diseased  
 CC tissue (e.g. osteoporosis or other bone-remodelling diseases) but more  
 CC generally in any situation where mimicking or agonism of hOP-1 is  
 CC required. note: this sequence does not appear in the specification; it  
 CC was created using information provided

XX Sequence 102 AA;

Query Match 100.0%; Score 111; DB 2; Length 102;

Best Local Similarity 100.0%; Pred. No. 4,5e-07;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20

DB 57 INPETHKPCCAPTOLNAIS 76

RESULT 9

AAM36889

ID AAM36889 standard; protein; 102 AA.

AC AAM36889;

DT 12-MAR-1998 (first entry)

DE Human osteogenic protein 1, a morphogenic protein.

KM Human osteogenic protein-1; hOP-1; OP-1; morphogen; morphogenic protein;

KW tissue-specific morphogenesis; 3-D structure; morphogenic analogue;

KM therapeutic agent; diseased tissue regeneration; osteoporosis;

KW bone-remodelling disease.

XX Homo sapiens.

OS

XX Key

FT Disulfide-bond 1..66 Location/Qualifiers

FT /note= "corresponds to residues 38 and 104 of the mature

FT protein"

FT Region

FT /note= "region designated Finger 1"

FT Disulfide-bond 30..99

FT /note= "corresponds to residues 67 and 136 of the mature

FT protein"

FT Disulfide-bond 34..101

FT /note= "corresponds to residues 71 and 138 of the mature

FT protein"

FT Region

FT /note= "region designated Heel"

FT Region

FT /note= "region designated Finger 2"

FT W09726277-A2.

PD 24-JUL-1997.

PF 22-JAN-1997; 97WO-US001071.

PR 22-JAN-1996; 96US-00589552.

XX (CREA-) CREATIVE BIOMOLECULES INC.

PA (UYBR-) UNIV BRANDERS.

XX Keck P, Griffith DL, Carlson WD, Rueger DC, Sampath KT;

XX WPI; 1997-385296/35.

DR

XX

XX

XX

XX

XX

Computer system containing crystallographic coordinates of human osteogenic protein-1 - useful for design of analogues with agonist activity, potentially useful for treating osteoporosis etc.

Disclosure; Page 72; 176pp; English.

The present sequence is defined as human osteogenic protein-1 (hOP-1) in the specification. OP-1 proteins are a group of morphogenetically active proteins. Morphogens are inactive when reduced, but are active as oxidised homodimers and when oxidised with other morphogens. Morphogenic proteins such as OP-1 play an important role, not only in embryogenesis, but also in tissue and organ maintenance and repair in mammals. They induce a developmental cascade of tissue-specific morphogenesis in a mammal. The 3-dimensional structure of hOP-1 was determined and a novel computer system used to define potential therapeutic agents. The system comprises a memory containing atomic X-ray crystallographic coordinates defining at least part of hOP-1, and a processor able to generate a molecular model having the three-dimensional shape representative of at least part of hOP-1. Morphogenic analogues with hOP-1-like activity can also be identified using this system. The analogues identified have, compared with native OP-1, better stability and/or solubility under physiological conditions, improved tissue target specificity, and reduced clearance rates. Typical applications of the therapeutic agents identified are in proliferation of progenitor cells and regeneration of damaged or diseased tissue (e.g. osteoporosis or other bone-remodelling diseases) but more generally in any situation where mimicking or agonism of hOP-1 is required.

Sequence 102 AA:

Query Match 100.0%; Score 111; DB 2; Length 102;  
 Best Local Similarity 100.0%; Pred. No. 4.5e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 INPETHKPCCAPTOLNAIS 20  
 57 INPETHKPCCAPTOLNAIS 76

RESULT 10  
 AAW36872  
 ID AAW36872 standard; protein; 102 AA.  
 XX AAW36872;  
 AC  
 XX  
 DT 25-MAR-2003 (revised)  
 DT 10-MAR-1998 (first entry)  
 XX  
 DE Human osteogenic protein 1 from which a consensus sequence is derived.  
 XX Human osteogenic protein; OP; OP-1; morphogen; morphogenic protein;  
 KM embryogenesis; organ maintenance; tissue-specific morphogenesis;  
 KM arthritis; emphysema; osteoporosis; cirrhosis.  
 XX  
 OS Homo sapiens.  
 OS  
 PN US5650276-A.  
 XX  
 PD 22-JUL-1997.  
 XX  
 PF 20-JUL-1994; 94US-00278729.  
 XX  
 XX 11-MAR-1991; 91US-00667274.  
 PR 30-AUG-1991; 91US-00752764.  
 PR 30-AUG-1991; 91US-00752861.  
 PR 28-AUG-1992; 92US-00938021.  
 XX  
 PA (CREA-) CREATIVE BIOMOLECULES INC.  
 XX Ozkaynak E, Oppermann H, Pang RH, Cohen CM, Kuberassampath T,  
 PI Rueger DC, Smart JB,  
 XX WPI; 1997-384665/35.

N-PSDB; AAT97877.

Screening for compounds which modulate morphogen expression - by incubating in the presence of epithelial cells which contain a cellular gene for morphogenic protein expression.

Claim 2; Page; 49pp; English.

The present sequence represents a part of a human osteogenic protein-1 (hOP-1). hOP-1 was first found in bone tissue, and is now known to be produced at relatively high levels in cells derived from renal or adrenal tissue. OP-1 proteins are a group of morphogenetically active proteins. Morphogens are inactive when reduced, but are active as oxidised homodimers and when oxidised with other morphogens (e.g. AAW36854-62). Comparison of the amino acid sequences of human and mouse OP-1 and OP-2 proteins has resulted in a consensus sequence, of which the present sequence is an example. Morphogenic proteins such as OP-1 play an important role, not only in embryogenesis, but also in tissue and organ maintenance and repair in mammals. They induce a developmental cascade of tissue-specific morphogenesis in a mammal. A novel method is described for screening a candidate compound for the ability to modulate expression of a cellular gene encoding a naturally occurring morphogenic protein. The candidate compound is incubated with epithelial cells which express the cellular gene, and after a period of time the epithelial cells are assayed for the presence of or the amount of the protein expressed by the cellular gene. A change in the level of the morphogenic protein relative to the level in the epithelial cells in the absence of the candidate compound is indicative of the ability of the compound to modulate expression of the cellular gene. The method can be used to identify compounds which can increase or decrease morphogen production or levels. Such compounds can be used in the treatment of, e.g. arthritis, emphysema, osteoporosis, kidney disease, lung diseases, cardiomyopathy, and cirrhosis of the liver. note:- the present sequence does not appear in the specification. It was created using information provided. (updated on 25-MAR-2003 to correct PR field.)

Sequence 102 AA:

Query Match 100.0%; Score 111; DB 2; Length 102;  
 Best Local Similarity 100.0%; Pred. No. 4.5e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 INPETHKPCCAPTOLNAIS 20  
 57 INPETHKPCCAPTOLNAIS 76

RESULT 11  
 AAY16708  
 ID AAY16708 standard; peptide; 102 AA.  
 XX AAY16708;  
 AC  
 XX  
 DT 17-AUG-1999 (first entry)  
 DT  
 XX  
 DE WO9914235 Seq ID No: 161.  
 XX  
 XX Growth factor; GF; persepabin; neuron growth; cellular degeneration;  
 KM peripheral neuropathy; amyotrophic lateral sclerosis; ischemic stroke;  
 KM Alzheimer's disease; Parkinson's disease; Huntington's disease; trauma;  
 KM brain injury; spinal cord injury; nervous system tumour; infection;  
 KM multiple sclerosis; cardiac muscle degeneration; injury; neurotoxin;  
 KM metabolic disease; diabetes; renal dysfunction; neuriturin.  
 XX  
 OS Unidentified.  
 OS  
 PN WO9914235-A1.  
 XX  
 PD 25-MAR-1999.  
 XX  
 PF 15-SEP-1998; 98WO-US019163.  
 XX  
 XX 16-SEP-1997; 97US-00931858.

XX (UNIW) UNIV WASHINGTON.  
 XX Johnson EW, Milbrandt JD, Kotzbauer PT, Lampe PA, Klein R;  
 PI Desauvage F;  
 DR WPI: 1999-244023/20.  
 XX New isolated persephin growth factor nucleic acids used to, e.g. promote  
 PT neuronal growth.  
 PS Disclosure; Page 181; 222pp; English.  
 XX The invention relates to a novel isolated and purified growth factor (GF)  
 CC that comprises persephin or a fragment or a conservatively substituted  
 CC variant. The persephin GF polypeptides can promote the survival and  
 CC growth of neurons and non-neuronal cells. The persephin GF polypeptides  
 CC or polynucleotides can be used for preventing or treating cellular  
 CC degeneration or insufficiency, e.g. neuronal degeneration resulting from  
 CC peripheral neuropathy, amyotrophic lateral sclerosis, Alzheimer's  
 CC disease, Parkinson's disease, Huntington's disease, ischemic stroke,  
 CC acute brain injury, acute spinal cord injury, nervous system tumors,  
 CC multiple sclerosis, or infection, hematopoietic cell degeneration or  
 CC insufficiency resulting from eosinopenia, anemia, thrombocytopenia, or  
 CC stem-cell insufficiencies, cardiac muscle degeneration or insufficiency  
 CC resulting from cardiomyopathy or congestive heart failure. They can also  
 CC be used for treating e.g. peripheral nerve trauma or injury, exposure to  
 CC neurotoxins, metabolic diseases such as diabetes or renal dysfunctions  
 CC and damage caused by infectious agents. The GF can also be used for  
 CC promoting the growth and/or differentiation of a cell in a culture  
 CC medium. The antisense polynucleotides can be used for treating a disease  
 CC condition mediated by expression of persephin by a population of cells.  
 CC The products can also be used for detection and diagnosis  
 XX  
 SQ Sequence 102 AA;  
 Query Match 100.0%; Score 111; DB 2; Length 102;  
 Best Local Similarity 100.0%; Pred. No. 4.5e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTQNLNALS 20  
 DB 57 INPETHKPCCAPTQNLNALS 76  
 RESULT 12  
 AA89697  
 ID AA89697 standard; peptide; 102 AA.  
 AC AA89697;  
 XX 20-MAR-2003 (revised)  
 DT 24-MAR-1999 (first entry)  
 XX Human osteogenic protein OP-1 fragment 330-431.  
 DE Human osteogenic protein OP-1 fragment 330-431.  
 XX Human; osteogenic protein; OP-1; OPx; endochondral bone formation;  
 KW cartilage; craniofacial defect; skeletal disorder; dental disorder;  
 KW non-union fracture; osteoarthritis; vascularisation; mineralisation;  
 KW bone marrow differentiation.  
 XX Homo sapiens.  
 XX US5863758-A.  
 EN 26-JAN-1999.  
 XX 23-MAY-1995; 95US-00449700.  
 PF 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.

PR 17-OCT-1989; 89US-00422659.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00680182.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 PR 01-NOV-1993; 93US-00147023.  
 XX (STYC) STRYKER CORP.  
 XX Pang RHL, Rueger DC, Kuberasampath T, Oppertmann H, Ozkaynak E;  
 PI WPI: 1999-131303/11.  
 XX Nucleic acid encoding mammalian osteogenic proteins in prepro form - able  
 PT to induce cartilage and bone formation when implanted in matrix, useful  
 PT for repairing bone defects.  
 XX Claim 28; Col 151; 127pp; English.  
 XX The present invention describes isolated DNA (I) encoding at least one  
 CC osteogenically active region of human osteogenic protein-1 in prepro form  
 CC (OP1-PP), murine OP1-PP, murine OP2-PP or human OP2-PP. Also described  
 CC are: (A) DNA related to (I) encoding a polypeptide able to form dimers  
 CC that can induce cartilage and endochondral bone formation in a mammal;  
 CC when implanted in a matrix; (B) vectors containing (I) or related DNA;  
 CC (C) host cells transformed with this vector; (D) DNA (I') encoding a  
 CC prepro- or pro-OP1, and related vectors and transformed cells; (E)  
 CC osteogenic protein (II) produced by expression of transformed mammalian  
 CC cells, able to induce bone and cartilage formation; (F) mature OP1  
 CC secreted from mammalian cells following expression of the sequence that  
 CC encodes hOP1-PP; and (G) production of an active osteogenic composition  
 CC by truncating mature OP1 protein. Host cells of (C) are used to produce  
 CC proteins able to induce cartilage and bone formation, e.g. for correction  
 CC of acquired or congenital craniofacial defects or other skeletal or  
 CC dental disorders; to heal non-union fractures; to repair cartilage, e.g.  
 CC in osteoarthritis, or generally wherever bone formation is required. The  
 CC proteins induce complete development of endochondral bone, including  
 CC vascularisation, mineralisation and bone marrow differentiation. The  
 CC present sequence represents a human OP1 fragment. (Updated on 20-MAR-2003  
 CC to correct PA field.)  
 XX  
 SQ Sequence 102 AA;  
 Query Match 100.0%; Score 111; DB 2; Length 102;  
 Best Local Similarity 100.0%; Pred. No. 4.5e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTQNLNALS 20  
 DB 57 INPETHKPCCAPTQNLNALS 76  
 RESULT 13  
 AA895443  
 ID AA895443 standard; protein; 102 AA.  
 AC AA895443;  
 XX 26-MAR-1999 (first entry)  
 DE Conserved 7 cysteine skeleton fragment from human OP1.  
 XX Cystic kidney disease; renal; therapeutic; osteogenic protein; OP;  
 KW bone morphogenic protein; BMP; growth factor-beta superfamily;  
 KW polycystic kidney disease; multicystic dysplastic kidney disease;

KM uraemic medullary cystic disease; human.  
 OS Homo sapiens.  
 XX  
 PN WO9850061-A1.  
 XX  
 PD 12-NOV-1998.  
 XX  
 PF 06-MAY-1998; 98MO-US009268.  
 XX  
 PR 07-MAY-1997; 97US-0045909P.  
 XX  
 PA (BIOU ) BIOGEN INC.  
 PI GJorstrup P, Harris R;  
 XX WPI; 1999-070084/06.  
 DR  
 XX  
 PT Treating cystic kidney disease - using renal therapeutic agents or  
 PT sequences encoding them, especially from the osteogenic protein/bone  
 PT morphogenic protein family.  
 XX  
 PS Claim 3; Page 5; 67tp; English.  
 XX  
 CC The invention relates to methods for treating cystic kidney diseases. The  
 CC method comprises administering an effective amount of a renal therapeutic  
 CC agent or a polynucleotide encoding the therapeutic agent. The therapeutic  
 CC agent is preferably a soluble or membrane bound polypeptide, e.g. a  
 CC member of the osteogenic protein/bone morphogenic protein (OP/BMP) family  
 CC which is a transforming growth factor-beta superfamily of proteins. It is  
 CC especially one of the polypeptides hOP1, hOP1-PP, OP1-18Ser, OPS, OP7,  
 CC OP1-18Ser, OP1-16Ser, OP1-16Ala, OP1-16Val, MOP1, MOP1-PP,  
 CC hOP2, hOP2-PP, hOP2-Ala, hOP2-Pro, hOP2-Arg, or hOP2-Ser or their  
 CC biologically active homologues. The method is used to treat humans  
 CC having, or at risk of, cystic kidney disease, e.g. autosomal recessive  
 CC (infantile) polycystic disease, multicystic dysplastic kidney disease,  
 CC uraemic medullary cystic disease, and autosomal dominant polycystic  
 CC kidney disease. The present sequence represents a human osteogenic  
 CC protein 1 (OP1) species defining the the conserved 7 cysteine skeleton in  
 CC the active region  
 CC  
 XX  
 SQ Sequence 102 AA;  
 Query March 100.0%; Score 111; DB 2; Length 102;  
 Best Local Similarity 100.0%; Pred. No. 4.5e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTQLNMAIS 20  
 Db 57 INPETHKPCCAPTQLNMAIS 76  
 RESULT 14  
 AAY92569 standard; peptide; 102 AA.  
 XX  
 AC AAY92569;  
 XX  
 DT 10-AUG-2000 (first entry)  
 XX  
 DE OP-1 finger-1-heel-finger-2 sequence.  
 XX  
 KW finger domain; heel region; BMP; TGF-beta family; protein refolding;  
 KW fusion protein; osteopetrotic; antibacterial; cytostatic.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT 2..29  
 FT Domain /label= finger\_1  
 FT 35..65  
 FT Region /label= heel  
 FT 68..98  
 FT Domain

FT /label= finger\_2  
 XX  
 PN WO200020449-A2.  
 XX  
 PD 13-APR-2000.  
 XX  
 PF 07-OCT-1999; 99MO-US023372.  
 XX  
 PR 07-OCT-1998; 98US-0103418P.  
 XX  
 PR 16-AUG-1999; 99US-00375233.  
 XX  
 PA (STYC ) STRYKER CORP.  
 XX  
 PI Oppermann H, Tai M, McCartney J;  
 XX WPI; 2000-303743/26.  
 DR  
 XX  
 PT A biologically active TGF-beta family member fusion protein competent to  
 PT refold, comprising a C-terminal linked TGF-beta family protein.  
 XX  
 PS Disclosure; Page 145-146; 160pp; English.  
 XX  
 CC AAY92554-82 show the finger 1, heel and finger 2 domains of TGF-beta  
 CC superfamily members. These sequences can be used to form novel fusion  
 CC proteins. Novel proteins comprise biologically active TGF-beta family  
 CC member fusion proteins competent to refold under suitable refolding  
 CC conditions. The fusion proteins comprise: (1) a TGF-beta family protein C  
 CC terminal seven cysteine domain, comprising finger 1, finger 2 and heel  
 CC subdomains; and (2) a heterologous leader sequence domain operatively  
 CC linked to the C-terminal domain. Truncations, heterodimers and mutants of  
 CC these fusion proteins and methods of purifying the heterodimers are also  
 CC claimed. The TGF-beta family proteins can be used to induce the full  
 CC cascade of morphogenic events which culminate in skeletal tissue  
 CC formation, including cartilage and endochondral bone formation. They are  
 CC useful in the binding of fibrin and fibronectin to the implanted matrix,  
 CC chondroblasts, cartilage formation, vascular invasion, bone formation,  
 CC remodeling, and bone marrow differentiation. The proteins have improved  
 CC physical properties such as solubility and stability, improved biological  
 CC activity, including altered receptor binding and improved targeting  
 CC capabilities  
 CC  
 XX  
 SQ Sequence 102 AA;  
 Query March 100.0%; Score 111; DB 3; Length 102;  
 Best Local Similarity 100.0%; Pred. No. 4.5e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTQLNMAIS 20  
 Db 57 INPETHKPCCAPTQLNMAIS 76  
 RESULT 15  
 AAB09534 standard; protein; 102 AA.  
 XX  
 ID AAB09534 standard; protein; 102 AA.  
 XX  
 AC AAB09534;  
 XX  
 DT 11-SEP-2000 (first entry)  
 XX  
 DE Human OP-1 C-terminal fragment. SEQ ID NO:55.  
 XX  
 KW TGF-beta superfamily; transforming growth factor-beta;  
 KW developmental regulation; finger 2 subdomain; basic region;  
 KW protein refolding; stability; solubility; osteogenic protein; OP;  
 KW bone morphogenetic protein; BMP; growth/differentiation factor; GDF;  
 KW inhibin; tissue morphogenesis; regeneration; bone; dental tissue;  
 KW connective tissue; cartilage; vulnary.  
 XX  
 OS Homo sapiens.  
 XX  
 PN WO200020607-A2.

XX 13-APR-2000.  
 PD 07-OCT-1999; 99WO-US023371.  
 PF 07-OCT-1999; 98US-0103418P.  
 PR 16-AUG-1999; 99US-00374958.  
 PS (STYC) STRYKER CORP.  
 PI Oppermann H, Tai M, McCartney J;  
 DR WPI; 2000-303767/26.  
 XX  
 PT Transforming growth factor-beta superfamily member mutant induces tissue  
 PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
 PT tissue and connective tissue and comprises a substitution in a region of  
 PT the finger 2 domain.  
 XX  
 PS Disclosure; Page 147-148; 162pp; English.  
 XX  
 CC The invention relates to mutant TGF-beta (transforming growth factor-  
 CC beta) superfamily members. These mutants comprise one or more amino acid  
 CC substitutions in the base region of the finger 2 subdomain, and a C-  
 CC terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
 CC 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an  
 CC amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
 CC Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
 CC beta superfamily proteins regulate developmental processes and include  
 CC proteins such as the osteogenic proteins (OPs), bone morphogenetic  
 CC proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors.  
 CC Specific examples of TGF-beta superfamily mutants encompassed by the  
 CC invention are the finger 2 subdomain mutants of human osteogenic protein-  
 CC 1 (OP-1) (AA09576-B09615). Mutant TGF-beta proteins are used for  
 CC inducing tissue morphogenesis in bone, non-mineralized skeletal tissue,  
 CC dental tissue, connective tissue, brain, liver and nerve tissue. The  
 CC proteins can be used in conjunction with a biocompatible matrix e.g.,  
 CC collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
 CC cartilage and/or other mineralized skeletal or connective tissues e.g.,  
 CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
 CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
 CC damaged mammalian tissue and to prevent or substantially inhibit  
 CC immune/inflammatory response-mediated tissue damage and scar tissue  
 CC formation following an injury. Compared to the wild-type TGF-beta  
 CC superfamily members, the mutant proteins have improved in vitro refolding  
 CC properties in a pH range of 6-9, increased solubility in aqueous solution  
 CC and improved stability and/or activity. Sequences AA09519-B09542 and  
 CC AA09553-B09558 represent a variety of wild-type TGF-beta superfamily  
 CC proteins referred to in the specification  
 XX  
 SQ Sequence 102 AA;  
 XX  
 CC Query Match 100.0%; Score 11; DB 3; Length 102;  
 CC Best Local Similarity 100.0%; Pred. No. 4.5e-07;  
 CC Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPVTVPKCCAPQOLNAIS 20  
 DB 57 INPVTVPKCCAPQOLNAIS 76  
 XX  
 RESULT 16  
 ID AAB02800 standard; protein; 102 AA.  
 AC AAB02800;  
 XX  
 DT 22-AUG-2000 (first entry)  
 XX  
 DE Human OP-1 amino acid sequence SEQ ID NO:55.  
 XX  
 KW Tumour growth factor beta; TGF-beta; morphogenic protein; BMP; OP;  
 KW bone morphogenic protein; osteogenic protein; mutant; modified;

KW finger 2 sub-domain; finger 1 domain; heel domain; chimeric protein;  
 KW osteogenic; proliferative; anti-inflammatory; tissue morphogenesis;  
 KW tissue repair; regeneration; proliferation; differentiation.  
 OS Homo sapiens.  
 PN WO200020591-A2.  
 PD 13-APR-2000.  
 PF 07-OCT-1999; 99WO-US023370.  
 PR 07-OCT-1999; 98US-0103418P.  
 PR 16-AUG-1999; 99US-00374956.  
 PS (STYC) STRYKER CORP.  
 PI Oppermann H, Tai M, McCartney J;  
 DR WPI; 2000-303766/26.  
 XX  
 PT Novel TGF-beta superfamily mutant chimeric protein, useful for inducing  
 PT tissue morphogenesis in e.g. bone, comprises a dimer consisting of one  
 PT monomer containing domains from two family members.  
 XX  
 PS Disclosure; Page 134-135; 149pp; English.  
 XX  
 CC The present invention describes a tumour growth factor beta (TGF-beta)  
 CC superfamily chimeric protein (I) derived from at least 2 different  
 CC members of the superfamily comprising a dimer with one monomer that  
 CC contains a finger 2 domain derived from a first family member and a  
 CC finger 1 domain and heel domain, both derived from a second family  
 CC member. The monomer further comprises a conserved C-terminal cysteine  
 CC skeleton. (I) has osteogenic, proliferative and anti-inflammatory  
 CC activities. The TGF-beta superfamily chimeric proteins (I) are useful for  
 CC inducing tissue morphogenesis (i.e. molecules capable of tissue repair  
 CC and regeneration and/or inhibiting inflammation) in bone, non-mineralized  
 CC skeletal tissue, dental tissue, connective tissue, brain, liver and nerve  
 CC and for inducing the proliferation and differentiation of uncommitted  
 CC progenitor cells in a tissue-specific manner to support new tissue  
 CC formation. AAA29687 to AAA29697 and AAB02748 to AAB02824 represent  
 CC sequences used in the exemplification of the present invention  
 XX  
 SQ Sequence 102 AA;  
 XX  
 CC Query Match 100.0%; Score 11; DB 3; Length 102;  
 CC Best Local Similarity 100.0%; Pred. No. 4.5e-07;  
 CC Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPVTVPKCCAPQOLNAIS 20  
 DB 57 INPVTVPKCCAPQOLNAIS 76  
 XX  
 RESULT 17  
 ID AAU10599 standard; protein; 102 AA.  
 AC AAU10599;  
 XX  
 DT 12-MAR-2002 (first entry)  
 XX  
 DE Human osteogenic protein 1 (hOP-1).  
 XX  
 DE Human, osteogenic protein 1 (hOP-1); OP-1; finger region; heel region;  
 KW morphogen; metabolic bone disease; osteopenia; bone; fracture;  
 KW protein coordinate data.  
 XX  
 OS Homo sapiens.  
 XX  
 XX Key Location/Qualifiers  
 XX Region 1..30  
 XX FT /note="Finger 1 region"  
 FT



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FT Region 34. .66
FT /note= "Heel region"
FT Region 67. .99
FT /note= "Finger 2 region"
XX
XX US6273598-B1.
XX
XX 14-AUG-2001.
XX
XX 22-JAN-1997; 97US-00786284.
XX
XX 22-JAN-1996; 96US-00589552.
XX
XX (CREA-) CREATIVE BIOMOLECULES INC.
XX
XX Keck PC, Griffith DL, Carlson WD, Rueger DC, Sampath KT;
XX WPI; 2001-606375/69.
XX
XX Computer system for producing morphogen analogs, has processor to
XX generate molecular model having three dimensional shape of portion of
XX human osteogenic protein from the finger or heel region.
XX
XX Disclosure; Fig 12; 127pp; English.
XX
XX The invention relates to a memory storing an atomic X-ray
XX crystallographic coordinate, which defines a portion of human osteogenic
XX protein-1 (hOP-1) of the finger or heel region. A processor, generates a
XX molecular model having a three dimensional shape of the portion of human
XX OP-1. This is used for designing, identifying and producing morphogen
XX analogues of hOP-1, for treating mammals with metabolic bone disease such
XX as osteopenia, or for generating morphogen based therapeutics for
XX treating injured or diseased mammalian tissue, such as bone during
XX fracture. This sequence represents human OP-1
XX
XX Sequence 102 AA:
XX
XX Query Match 100.0%; Score 111; DB 4; Length 102;
XX Best Local Similarity 100.0%; Pred. No. 4.5e-07;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX 1 INPETHKPCCAPTQLNLAIS 20
XX |||||||||||||||||||
XX 57 INPETHKPCCAPTQLNLAIS 76
XX
XX RESULT 18
XX ABB76281 standard; protein; 102 AA.
XX
XX ABB76281;
XX
XX 12-AUG-2002 (first entry)
XX
XX Mature human osteogenic protein-1.
XX
XX Osteogenic protein-1; OP-1; hOP-1; human; morphogen; vulneryary;
XX antiinflammatory; protein co-ordinate data; cyclic.
XX
XX Homo sapiens.
XX
XX Key Location/Qualifiers
XX Disulfide-bond 1. .67
XX Region 1. .34
XX /label= Finger-1
XX Disulfide-bond 30. .99
XX Region 34. .101
XX /label= Heel
XX 68. .102
XX /label= Finger-2
XX
XX US2002028453-A1.

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XX
XX 07-MAR-2002.
XX
XX 22-FEB-2001; 2001US-00791946.
XX
XX 22-JAN-1996; 96US-00589552.
XX
XX 22-JAN-1997; 97US-00786284.
XX
XX (KECK/) KECK P C.
XX (GRIF/) GRIFFITH D L.
XX (CARL/) CARLSON W D.
XX (RUEG/) RUEGER D C.
XX (SAMP/) SAMPATH K T.
XX
XX Keck PC, Griffith DL, Carlson WD, Rueger DC, Sampath KT;
XX WPI; 2002-414103/44.
XX
XX Producing morphogen analog having osteogenic protein-1 like biological
XX activity useful for therapeutic purposes, involves use of a portion of
XX atomic co-ordinates defining three-dimensional structure of the protein.
XX
XX Disclosure; Page 26; 128pp; English.
XX
XX The present sequence is the protein sequence of human mature osteogenic
XX protein-1 (hOP-1), including the finger-1, heel and finger-2 regions. The
XX present invention is based on the X-ray crystallographic determination of
XX the 3-dimensional structure of mature, dimeric hOP-1. The 3-dimensional
XX structure of hOP-1 has been resolved to 2.3 Angstroms. 2 sets of atomic X
XX -ray crystallographic co-ordinates for hOP-1 are provided, the first
XX defining an hOP-1 structure resolved to a resolution of 2.8 Angstroms and
XX the other to a resolution of 2.3 Angstroms. These sets of atomic co-
XX ordinates can be used in the computer aided design of protein or peptide
XX analogues of OP-1, or to identify or design small organic molecules that
XX functionally mimic OP-1. The engineering of hOP-1 dimers to improve
XX stability, enhance water solubility, or to add or remove glycosylation
XX sites, is envisaged. A compound that modulates OP-1 activity is useful
XX for repairing diseased or damaged mammalian tissue, and for preventing or
XX inhibiting immune/inflammatory response-mediated tissue damage or scar
XX tissue formation following injury
XX
XX Sequence 102 AA:
XX
XX Query Match 100.0%; Score 111; DB 5; Length 102;
XX Best Local Similarity 100.0%; Pred. No. 4.5e-07;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX 1 INPETHKPCCAPTQLNLAIS 20
XX |||||||||||||||||||
XX 57 INPETHKPCCAPTQLNLAIS 76
XX
XX RESULT 19
XX ADG14142
XX ADG14142 standard; protein; 102 AA.
XX
XX ADG14142;
XX
XX 26-FEB-2004 (first entry)
XX
XX Human osteogenic protein. OP-1.
XX
XX Human; osteogenic protein-1; OP-1; transforming growth factor beta;
XX TGFbeta; bone morphogenic protein; BMP5; BMP6; BMP2; BMP4; BMP8/OP2;
XX Growth Differentiation Factor; GDF5; GDF6; GDF7; cell growth;
XX cell differentiation; cell proliferation.
XX
XX Homo sapiens.
XX
XX US2003185792-A1.
XX
XX 02-OCT-2003.

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PF 06-JUN-2002; 2002US-00164279.  
 XX  
 XX 22-JAN-1996; 96US-00569552.  
 XX 22-JAN-1997; 97US-00766284.  
 XX 22-FEB-2001; 2001US-00751946.  
 XX 06-JUN-2001; 2001US-0296291P.  
 XX 05-FEB-2002; 2002US-0354820P.  
 XX 10-APR-2002; 2002US-0371298P.  
 XX  
 XX (CIRI-) CURIS INC.  
 XX  
 XX Keck PC, Bosukonda D;  
 XX  
 XX WPI; 2004-031977/03.  
 XX  
 XX Bone morphogenic protein antagonist peptide comprises peptide sequence  
 XX having specified amino acid residues including contiguous amino acids of  
 XX specific amino acid sequences given in the specifications.  
 XX  
 XX  
 XX Disclosure; SEQ ID NO 4; 88pp; English.  
 XX  
 XX The invention relates to a bone morphogenic protein (BMP) antagonist  
 XX peptide comprising a peptide sequence having 6-50 amino acid residues  
 XX based on or chosen from the finger 1, heel or finger 2 regions of the  
 XX TGF-beta (transforming growth factor beta) family proteins osteogenic  
 XX protein-1 (OP-1), BMP5, BMP6, BMP2, BMP4, BMPs/OP2, GDF5 (Growth  
 XX Differentiation Factor), GDF6 and GDF7. Also included are a peptide that  
 XX brings together a type (I) and type (II) receptor (comprising a first  
 XX three contiguous amino acids of the protein regions detailed above and a  
 XX second peptide sequence having a cysteine residue on each end and  
 XX including at least three contiguous amino acids of 1-34 amino acids of 10  
 XX different amino acid sequences given in the specifications), a nucleic  
 XX acid sequence encoding the above peptide, a pharmaceutical preparation  
 XX comprising a sterile excipient and the above peptide, a peptidomimetic of  
 XX the peptide and inhibiting or promoting growth, differentiation, or  
 XX proliferation of a cell by contacting the cell with the above peptide.  
 XX The antagonist peptides are used to antagonise bone morphogenic protein-  
 XX like biological activity, preferably osteogenic protein-1 activity. The  
 XX inventive peptide mimics or enhances the physiological effects of a  
 XX morphogenic protein, such as osteogenic protein-1 (OP-1). The present  
 XX sequence is a BMP-like protein used to design the peptides of the  
 XX invention.  
 XX  
 XX Sequence 102 AA;  
 XX  
 XX Query Match 100.0%; Score 111; DB 8; Length 102;  
 XX Best Local Similarity 100.0%; Pred. No. 4.5e-07;  
 XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 XX  
 XX 1 INPETHKPCCAPQNLNALS 20  
 XX 57 INPETHKPCCAPQNLNALS 76  
 XX  
 XX RESULT 20  
 XX ADO36196  
 XX ID ADO36196 standard; protein; 102 AA.  
 XX  
 XX ADO36196;  
 XX  
 XX 29-JUN-2004 (first entry)  
 XX  
 XX Transformation and differentiation factor-1 fragment #1.  
 XX  
 XX memory stores atomic X-ray crystallographic coordinate; human;  
 XX transformation and differentiation factor-1; TDF-1;  
 XX morphogen analogue production; tissue morphogenic protein;  
 XX tissue morphogenic protein mimetic; solubility; stability;  
 XX protein co-ordinate data.  
 XX  
 XX Homo sapiens.  
 XX  
 XX

PN US2004093164-A1.  
 XX  
 XX 13-MAY-2004.  
 XX  
 XX 08-NOV-2002; 2002US-00290554.  
 XX  
 XX 08-NOV-2002; 2002US-00290554.  
 XX  
 XX (CARL/) CARLSON W D.  
 XX (KECK/) KECK P C.  
 XX  
 XX Carlson WD, Keck PC;  
 XX  
 XX WPI; 2004-439217/41.  
 XX  
 XX Computer system for producing tissue morphogenic protein analogs, has  
 XX memory to store atomic X-ray crystallographic coordinates defining  
 XX portion of human transformation and differentiation factor-1 (hTDF-1).  
 XX  
 XX  
 XX Disclosure; Fig 3; 82pp; English.  
 XX  
 XX The invention describes memory stores atomic X-ray crystallographic  
 XX coordinates defining a portion of human transformation and  
 XX differentiation factor-1 (hTDF-1). A processor communicates with the  
 XX memory to generate a molecular model having a three-dimensional shape  
 XX representing portion of hTDF-1. Also described is a morphogen analogue  
 XX production method. The system is useful for designing, identifying and  
 XX producing molecules which act as functional mimetics of tissue  
 XX morphogenic protein, TDF-1. The molecule is designed with enhanced  
 XX solubility and stability under physiological condition. Also the  
 XX biological activity of the hTDF-1 in mammal is enhanced. This is the  
 XX amino acid sequence of a C-terminal fragment of human transformation  
 XX differentiation factor-1 (TDF-1) comprising the finger-1, heel and finger  
 XX -2 regions, used in a comparison with another tissue morphogen protein,  
 XX transforming growth factor beta 2 (TGF-beta2).  
 XX  
 XX Sequence 102 AA;  
 XX  
 XX Query Match 100.0%; Score 111; DB 8; Length 102;  
 XX Best Local Similarity 100.0%; Pred. No. 4.5e-07;  
 XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 XX  
 XX 1 INPETHKPCCAPQNLNALS 20  
 XX 57 INPETHKPCCAPQNLNALS 76.  
 XX  
 XX RESULT 21  
 XX AA92027  
 XX ID AA92027 standard; protein; 111 AA.  
 XX  
 XX AA92027;  
 XX  
 XX 19-JUN-2000 (first entry)  
 XX  
 XX Human bone morphogenic protein-7, osteogenic protein-1 factor monomer.  
 XX  
 XX human bone morphogenic protein-6; BMP-6; osteogenic protein-1 factor;  
 XX CKGF; mutant; cysteine knot growth factor; hairpin loop; infertility.  
 XX  
 XX Homo sapiens.  
 XX  
 XX Location/Qualifiers  
 XX Key 1..20  
 XX Misc-difference /note= "optionally mutated to increase electrostatic  
 XX interaction between beta hairpin structure and a  
 XX receptor"  
 XX Domain 21..40  
 XX /label= beta\_hairpin\_loop\_1  
 XX /note= "mutant optionally comprises one or more  
 XX substitutions in these residues"  
 XX Misc-difference 41..80  
 XX /note= "optionally mutated to increase electrostatic  
 XX

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FT      interaction between beta hairpin structure and a
FT      receptor"
FT      Domain
FT      81..102
FT      /label= beta_hairpin_loop_3
FT      /note= "mutant optionally comprises one or more
FT      substitutions in these residues"
FT      Misc-difference
FT      103..111
FT      /note= "optionally mutated to increase electrostatic
FT      interaction between beta hairpin structure and a
FT      receptor"
XX      WO200017360-A1.
XX      30-MAR-2000.
XX      19-MAR-1999; 99WO-US005908.
XX      22-SEP-1998; 98WO-US019772.
XX      (UYMA-) UNIV MARYLAND BALTIMORE.
XX      PI
XX      Weintrraub BD, Skudlinski MW;
XX      WPI; 2000-283585/24.
XX      New mutant cysteine knot growth factor proteins comprising one or more
XX      mutant subunits, useful for treating or preventing diseases e.g.
XX      hypothyroidism and thyroid cancer.
XX      Claim 447; Page 309; 320pp; English.
XX      This is wild type human bone morphogenic protein-7 (osteogenic protein-1
XX      factor monomer). Mutants comprise at least one electrostatic charge
XX      altering mutation in a beta hairpin loop, resulting in increased
XX      bioactivity. Mutant cysteine knot growth factor (CKGF) proteins comprising
XX      one or more mutant subunits and having novel properties or improved
XX      pharmacological properties, compared to wild type CKGFs, are claimed. The
XX      CKGF superfamily comprises at least four families of growth factors: the
XX      glycoprotein hormones, the platelet-derived growth factor (PDGF) family,
XX      the neurotrophins and the transforming growth factor-beta family; the
XX      families are known to be structurally similar (especially comprising the
XX      cysteine knot topology) and it was shown that mutations at certain
XX      positions in the CKGF hairpin loops of family members and other members
XX      of the CKGF superfamily could significantly alter the biological
XX      activities of the CKGF. Mutant transforming growth factor family proteins
XX      or analogues are useful for treatment of ovulatory dysfunction, luteal
XX      phase defect, unexplained infertility, time-limited conception and in
XX      assisted reproduction
XX      Sequence 111 AA:
SQ      Query Match
SQ      Best Local Similarity 100.0%; Score 111; DB 3; Length 111;
SQ      Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Cy      1 INPETHKPCCAPTQLNALS 20
Db      67 INPETHKPCCAPTQLNALS 86
RESULT 22
ID      AAR53361 standard; protein; 114 AA.
XX      AAR53361;
XX      25-MAR-2003 (revised)
XX      01-JUL-2002 (revised)
XX      06-JUN-1994 (first entry)
XX      N-terminally truncated osteogenic protein OPl (OPl-16val).
XX      Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;

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XX      vascularisation; mineralisation; differentiation.
XX      OS
XX      Homo sapiens.
XX      US5266663-A.
XX      30-NOV-1993.
XX      21-FEB-1992; 92US-00841646.
XX      08-APR-1988; 88US-00179406.
XX      15-AUG-1988; 88US-00232630.
XX      23-FEB-1989; 89US-00315342.
XX      17-OCT-1989; 89US-00422613.
XX      17-OCT-1989; 89US-00422699.
XX      22-FEB-1990; 90US-00483913.
XX      20-AUG-1990; 90US-00569920.
XX      07-SEP-1990; 90US-00579865.
XX      18-OCT-1990; 90US-00599543.
XX      18-OCT-1990; 90US-00600024.
XX      21-NOV-1990; 90US-00616374.
XX      04-DEC-1990; 90US-00621849.
XX      22-FEB-1991; 91US-00660162.
XX      20-DEC-1991; 91US-00810560.
XX      28-JAN-1992; 92US-00827052.
XX      (STYC ) STRYKER CORP.
XX      PI
XX      Kuberassampath T, Ozkaynak E, Rueger DC, Pang RHL, Oppermann H;
XX      WPI; 1993-395405/49.
XX      DR
XX      N-PSDB; AAQ53141.
XX      New pure mammalian osteogenic proteins - induce cartilage and
XX      endochondral bone formation when in association with a matrix.
XX      Claim 8; Col 69-72; 128pp; English.
XX      This sequence is a fragment of the osteogenic protein OPl and is
XX      designated OPl-16val. The osteogenic protein when in association with a
XX      matrix can induce at the locus of an implant the full development cascade
XX      of endochondral bone formation including vascularisation, mineralisation
XX      and bone marrow differentiation. The osteogenic protein can also be used
XX      to repair both bone and cartilage in the treatment of osteoarthritis.
XX      (Updated on 01-JUN-2002 to add missing PA field.) (Updated on 25-MAR-2003
XX      to correct PF field.) (Updated on 25-MAR-2003 to correct PR field.)
XX      Sequence 114 AA:
SQ      Query Match
SQ      Best Local Similarity 100.0%; Score 111; DB 2; Length 114;
SQ      Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Cy      1 INPETHKPCCAPTQLNALS 20
Db      69 INPETHKPCCAPTQLNALS 88
RESULT 23
ID      AAW95454 standard; protein; 114 AA.
XX      AAW95454;
XX      26-MAR-1999 (first entry)
XX      N-terminally truncated mature human OPl, OPl-16val (residues 318-431).
XX      Cystic kidney disease; renal; therapeutic; osteogenic protein; OP;
XX      bone morphogenic protein; BMP; growth factor-beta superfamily;
XX      polycystic kidney disease; multicystic dysplastic kidney disease;
XX      uterine medullary cystic disease; human; OPl; truncated.

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XX OS Homo sapiens.
XX XX
XX FN W09850061-A1.
XX PD 12-NOV-1998.
XX PF 06-MAY-1998; 98WO-US009268.
XX PR 07-MAY-1997; 97US-0045909P.
XX XX
XX PA (BIOJ ) BIOGEN INC.
XX PI GJorstrup P, Harris R;
XX DR WPI, 1999-070084/06.
XX PT Treating cystic kidney disease - using renal therapeutic agents or
XX PT sequences encoding them, especially from the osteogenic protein/bone
XX PT morphogenic protein family.
XX PS
XX PS Claim 4; Page: 67pp; English.
XX CC The invention relates to methods for treating cystic kidney diseases. The
XX CC method comprises administering an effective amount of a renal therapeutic
XX CC agent or a polynucleotide encoding the therapeutic agent. The therapeutic
XX CC agent is preferably a soluble or membrane bound polypeptide, e.g. a
XX CC member of the osteogenic protein/bone morphogenic protein (OP/BMP) family
XX CC within a transforming growth factor-beta superfamily of proteins. It is
XX CC especially one of the polypeptides hOP1, hOP1-PP, OP1-18Ser, OP1-18Ser-PP,
XX CC OP1-16Ser, OP1-16Ser-PP, OP1-16Met, OP1-16Ala, OP1-16Val, hOP1-PP,
XX CC hOP2, hOP2-PP, hOP2-1Ala, hOP2-1Pro, hOP2-1Arg, or hOP2-1Ser or their
XX CC biologically active homologues. The method is used to treat humans
XX CC having, or at risk of, cystic kidney disease, e.g. autosomal recessive
XX CC (infantile) polycystic disease, multicystic dysplastic kidney disease,
XX CC uremic medullary cystic disease, and autosomal dominant polycystic
XX CC kidney disease. The present sequence represents a N-terminally truncated
XX CC mature human osteogenic protein 1 (OP1) that can be used as a therapeutic
XX CC agent in the method of the invention. Note: This sequence is not provided
XX CC in the specification. It has been derived from the human OP1 sequence
XX CC (AAW95448) obtained from U.S. Patent No. 5,266,683
XX SQ
XX Query Match 100.0%; Score 111; DB 2; Length 114;
XX Best Local Similarity 100.0%; Pred. No. 5.1e-07;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 INPETHPCCAPTOLNAIS 20
DB 69 INPETHPCCAPTOLNAIS 88

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RESULT 24  
AAR53362  
ID AAR53362 standard; protein; 116 AA.  
XX  
XX AAR53362;  
XX AC  
XX DT 25-MAR-2003 (revised)  
XX DT 01-JUL-2002 (revised)  
XX DT 06-JUN-1994 (first entry)  
XX DE N-terminally truncated osteogenic protein OP1 (OP1-16Ala).  
XX KW Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;  
XX KW vascularisation; mineralisation; differentiation.  
XX OS Homo sapiens.  
XX OS  
XX PN US266683-A.  
XX PD 30-NOV-1993.

```

XX XX
XX PF 21-FEB-1992; 92US-00641646.
XX PR 06-APR-1988; 88US-00179406.
XX PR 15-AUG-1988; 88US-00232630.
XX PR 23-FEB-1989; 89US-00315342.
XX PR 17-OCT-1989; 89US-00422613.
XX PR 17-OCT-1989; 89US-00422699.
XX PR 22-FEB-1990; 90US-00483913.
XX PR 20-AUG-1990; 90US-00569920.
XX PR 07-SEP-1990; 90US-00579865.
XX PR 18-OCT-1990; 90US-00593953.
XX PR 18-OCT-1990; 90US-00600024.
XX PR 21-NOV-1990; 90US-00616374.
XX PR 04-DEC-1990; 90US-00621849.
XX PR 04-DEC-1990; 90US-00621988.
XX PR 22-FEB-1991; 91US-00660162.
XX PR 20-DEC-1991; 91US-00810550.
XX PR 28-JAN-1992; 92US-00827052.
XX XX
XX PA (STYC ) STRYKER CORP.
XX PI
XX PI Kuberzampath T, Ozkaynak E, Rueger DC, Pang RHL, Oppermann H;
XX DR WPI, 1993-395405/49.
XX DR N-PSDB; AAQ53141.
XX PT New pure mammalian osteogenic proteins - induce cartilage and
XX PT endochondral bone formation when in association with a matrix.
XX PS
XX PS Claim 9; Col 69-72; 128pp; English.
XX CC This sequence is a fragment of the osteogenic protein OP1 and is
XX CC designated OP1-16Ala. The osteogenic protein when in association with a
XX CC matrix can induce at the locus of an implant the full development cascade
XX CC of endochondral bone formation including vascularisation, mineralisation
XX CC and bone marrow differentiation. The osteogenic protein can also be used
XX CC to repair both bone and cartilage in the treatment of osteoarthritis.
XX CC (Updated on 01-JUL-2002 to add missing PA field.) (Updated on 25-MAR-2003
XX CC to correct PF field.) (Updated on 25-MAR-2003 to correct PR field.)
XX SQ
XX Query Match 100.0%; Score 111; DB 2; Length 116;
XX Best Local Similarity 100.0%; Pred. No. 5.1e-07;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 INPETHPCCAPTOLNAIS 20
DB 71 INPETHPCCAPTOLNAIS 90

```

RESULT 25  
AAW95453  
ID AAW95453 standard; protein; 116 AA.  
XX  
XX AAW95453;  
XX AC  
XX DT 26-MAR-1999 (first entry)  
XX DE N-terminally truncated mature human OP1, OP1-16Ala (residues 316-431).  
XX KW Cystic kidney disease; renal; therapeutic; osteogenic protein; OP;  
XX KW bone morphogenic protein; BMP; growth factor-beta superfamily;  
XX KW polycystic kidney disease; multicystic dysplastic kidney disease;  
XX KW uremic medullary cystic disease; human; OP1; truncated.  
XX OS Homo sapiens.  
XX OS  
XX PN W09850061-A1.  
XX PD 12-NOV-1998.

PF 06-MAY-1998; 98WO-US009268.  
XX  
XX 07-MAY-1997; 97US-0045909P.  
XX  
XX (BIOJ ) BIOGEN INC.  
XX  
XX Gjoerstrup P, Harris R;  
XX WPI; 1999-070084/06.  
XX  
XX  
XX Treating cystic kidney disease - using renal therapeutic agents or  
PT sequences encoding them, especially from the osteogenic protein/bone  
PT morphogenic protein family.  
XX  
XX  
XX Claim 4; Page; 67pp; English.  
XX  
XX The invention relates to methods for treating cystic kidney diseases. The  
CC method comprises administering an effective amount of a renal therapeutic  
CC agent or a polynucleotide encoding the therapeutic agent. The therapeutic  
CC agent is preferably a soluble or membrane bound polypeptide, e.g. a family  
CC member of the osteogenic protein/bone morphogenic protein (OP/BMP) family  
CC within a transforming growth factor-beta superfamily of proteins. It is  
CC especially one of the polypeptides hOP1, hOP1-PP, OP1-16Ser, OP1, OP7,  
CC OP1-16Ser, OP1-16Met, OP1-16Met, OP1-16Ala, OP1-16Val, hOP1-PP,  
CC hOP2, hOP2-PP, hOP2-Ala, hOP2-Pro, hOP2-Arg, or hOP2-Ser or their  
CC biologically active homologues. The method is used to treat humans  
CC having, or at risk of, cystic kidney disease, e.g. autosomal recessive  
CC (infantile) polycystic disease, multicystic dysplastic kidney disease,  
CC uremic medullary cystic disease, and autosomal dominant polycystic  
CC kidney disease. The present sequence represents a N-terminally truncated  
CC mature human osteogenic protein 1 (OP1) that can be used as a therapeutic  
CC agent in the method of the invention. Note: This sequence is not provided  
CC in the specification. It has been derived from the human OP1 sequence  
CC (AAW95448) obtained from U.S. Patent No. 5,266,683  
XX  
XX Sequence 116 AA;  
SQ  
Query Match 100.0%; Score 111; DB 2; Length 116;  
Best Local Similarity 100.0%; Pred. No. 5,1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTOLNAIS 20  
DB 71 INPETHKPCCAPTOLNAIS 90  
RESULT 26  
AAW95363  
ID AAW95363 standard; protein; 117 AA.  
XX  
XX AAW95363;  
AC  
XX 25-MAR-2003 (revised)  
DT 01-JUL-2002 (revised)  
DT 06-JUN-1994 (first entry)  
XX  
XX N-terminally truncated osteogenic protein OP1 (OP1-16Met).  
XX  
XX Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;  
XX vascularisation; mineralisation; differentiation.  
XX  
XX Homo sapiens.  
OS  
XX  
XX US5266683-A.  
PN  
XX 30-NOV-1993.  
PD  
XX 21-FEB-1992; 92US-00841646.  
PF  
XX 08-APR-1988; 88US-00179406.  
PR 15-AUG-1988; 88US-00232630.  
PR 23-FEB-1989; 89US-00315342.  
PR 17-OCT-1989; 89US-00422613.  
PI

PR 17-OCT-1989; 89US-00422699.  
PR 22-FEB-1990; 90US-00483913.  
PR 20-AUG-1990; 90US-00569920.  
PR 07-SEP-1990; 90US-00579865.  
PR 18-OCT-1990; 90US-00599543.  
PR 18-OCT-1990; 90US-00600024.  
PR 21-NOV-1990; 90US-00616373.  
PR 04-DEC-1990; 90US-00621849.  
PR 04-DEC-1990; 90US-00621988.  
PR 22-FEB-1991; 91US-00660162.  
PR 20-DEC-1991; 91US-00810560.  
PR 28-JAN-1992; 92US-00827052.  
XX  
XX (STYC ) STRYKER CORP.  
XX  
XX Kuberassampath T, Ozkaynak E, Rueger DC, Fang RHL, Oppermann H;  
XX WPI; 1993-395405/49.  
XX  
XX N-PSDB; AAG53141.  
DR  
XX  
XX New pure mammalian osteogenic proteins - induce cartilage and  
PT endochondral bone formation when in association with a matrix.  
XX  
XX Claim 10; Col 69-72; 128pp; English.  
XX  
XX This sequence is a fragment of the osteogenic protein OP1 and is  
CC designated OP1-16Met. The osteogenic protein when in association with a  
CC matrix can induce at the locus of an implant the full development cascade  
CC of endochondral bone formation including vascularisation, mineralisation  
CC and bone marrow differentiation. The osteogenic protein can also be used  
CC to repair both bone and cartilage in the treatment of osteoarthritis.  
CC (Updated on 01-JUN-2002 to add missing PA field.) (Updated on 25-MAR-2003  
CC to correct PF field.) (Updated on 25-MAR-2003 to correct PR field.)  
XX  
XX Sequence 117 AA;  
SQ  
Query Match 100.0%; Score 111; DB 2; Length 117;  
Best Local Similarity 100.0%; Pred. No. 5,2e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTOLNAIS 20  
DB 72 INPETHKPCCAPTOLNAIS 91  
RESULT 27  
AAW95452  
ID AAW95452 standard; protein; 117 AA.  
XX  
XX AAW95452;  
AC  
XX 26-MAR-1999 (first entry)  
DT  
XX  
XX N-terminally truncated mature human OP1, OP1-16Met (residues 315-431).  
XX  
XX Cystic kidney disease; renal; therapeutic; osteogenic protein; OP;  
XX bone morphogenic protein; BMP; growth factor-beta superfamily;  
XX polycystic kidney disease; multicystic dysplastic kidney disease;  
XX uremic medullary cystic disease; human; OP1; truncated.  
XX  
XX Homo sapiens.  
OS  
XX  
XX WO9850061-A1.  
PN  
XX 12-NOV-1998.  
PD  
XX 06-MAY-1998; 98WO-US009268.  
PF  
XX 07-MAY-1997; 97US-0045909P.  
PR  
XX (BIOJ ) BIOGEN INC.  
XX  
XX Gjoerstrup P, Harris R;  
PI

XX DR WPI; 1999-070084/06.  
 XX PT Treating cystic kidney disease - using renal therapeutic agents or  
 PT sequences encoding them, especially from the osteogenic protein/bone  
 PT morphogenic protein family.  
 XX PS  
 XX Claim 4; Page; 67pp; English.  
 XX CC The invention relates to methods for treating cystic kidney diseases. The  
 CC method comprises administering an effective amount of a renal therapeutic  
 CC agent or a polynucleotide encoding the therapeutic agent. The therapeutic  
 CC agent is preferably a soluble or membrane bound polypeptide, e.g. a family  
 CC member of the osteogenic protein/bone morphogenic protein (OP/BMP) family  
 CC within a transforming growth factor-beta superfamily of proteins. It is  
 CC especially one of the polypeptides hOP1, hOP1-PP, OP1-16Ser, OP5, OP7,  
 CC OP1-16Ser, OP1-16Leu, OP1-16Met, OP1-16Ala, OP1-16Val, hOP1, hOP1-PP,  
 CC hOP2, hOP2-PP, hOP2-1Aa, hOP2-Pro, hOP2-Arg, or hOP2-Ser or their  
 CC biologically active homologues. The method is used to treat humans  
 CC having or at risk of, cystic kidney disease, e.g. autosomal recessive  
 CC (infantile) polycystic disease, multicystic dysplastic kidney disease,  
 CC uremic medullary cystic disease, and autosomal dominant polycystic  
 CC kidney disease. The present sequence represents a N-terminally truncated  
 CC mature human osteogenic protein 1 (OP1) that can be used as a therapeutic  
 CC agent in the method of the invention. Note: This sequence is not provided  
 CC in the specification. It has been derived from the human OP1 sequence  
 CC (AAW95448) obtained from U.S. Patent No. 5,266,683  
 XX SQ  
 XX Sequence 117 AA;  
 SQ Query Match 100.0%; Score 111; DB 2; Length 117;  
 Best Local Similarity 100.0%; Pred. No. 5.2e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 OY 1 INPETHPPKCCAPQTQNLNHS 20  
 DB 72 INPETHPPKCCAPQTQNLNHS 91  
 RESULT 28  
 AA92595  
 ID AAY92595 standard; protein; 117 AA.  
 AC AAY92595;  
 XX 10-AUG-2000 (first entry)  
 XX DE Trypsin truncated H2223 mutant OP-1.  
 XX KW finger 2 subdomain; BMP, TGF-beta family; protein refolding; OP-1;  
 XX fusion protein; osteopathic; antibacterial; cytoskeletal; mutant.  
 XX OS Homo sapiens.  
 XX PN WO200020449-A2.  
 XX PD 13-APR-2000.  
 XX PF 07-OCT-1999; 99WO-US023372.  
 XX PR 07-OCT-1998; 98US-0103418P.  
 XX PR 16-AUG-1999; 99US-00375333.  
 XX PA (STYC) STRYKER CORP.  
 XX PI Oppermann H, Tai M, McCartney J;  
 XX DR WPI; 2000-303743/26.  
 XX PT A biologically active TGF-beta family member fusion protein competent to  
 PT refold, comprising a C-terminal linked TGF-beta family protein.  
 XX PS Claim 16; Page 153-154; 160pp; English.

XX CC This is a trypsin truncated mutant H2223 OP-1 construct. Novel proteins  
 CC comprise biologically active TGF-beta family member fusion proteins  
 CC competent to refold under suitable refolding conditions. The fusion  
 CC proteins comprise: (1) a TGF-beta family protein C-terminal seven  
 CC cysteine domain, comprising finger 1, finger 2 and heel subdomains; and  
 CC (2) a heterologous leader sequence domain operatively linked to the C-  
 CC terminal domain. Truncations, heterodimers and mutants of these fusion  
 CC proteins and methods of purifying the heterodimers are also claimed. The  
 CC TGF-beta family proteins can be used to induce the full cascade of  
 CC morphogenic events which culminate in skeletal tissue formation,  
 CC including cartilage and endochondral bone formation. They are useful in  
 CC the binding of fibrin and fibronectin to the implanted matrix, chemotaxis  
 CC of cells, proliferation of fibroblasts, differentiation into  
 CC chondroblasts, cartilage formation, vascular invasion, bone formation,  
 CC remodeling, and bone marrow differentiation. The proteins have improved  
 CC physical properties such as solubility and stability, improved biological  
 CC activity, including altered receptor binding and improved targeting  
 CC capabilities  
 XX SQ  
 XX Sequence 117 AA;  
 SQ Query Match 100.0%; Score 111; DB 3; Length 117;  
 Best Local Similarity 100.0%; Pred. No. 5.2e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 OY 1 INPETHPPKCCAPQTQNLNHS 20  
 DB 72 INPETHPPKCCAPQTQNLNHS 91  
 RESULT 29  
 AAB09548  
 ID AAB09548 standard; protein; 117 AA.  
 AC AAB09548;  
 XX 11-SEP-2000 (first entry)  
 XX DE Trypsin truncated OP-1 mutant protein H2223, SEQ ID NO:69.  
 XX KW Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
 XX transforming growth factor-beta; developmental regulation;  
 XX finger 2 subdomain; basic region; protein refolding; stability;  
 XX solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
 XX connective tissue; cartilage; vulnary; mutant; mutein.  
 XX OS Homo sapiens.  
 XX OS Synthetic.  
 XX PN WO200020607-A2.  
 XX PD 13-APR-2000.  
 XX PF 07-OCT-1999; 99WO-US023371.  
 XX PR 07-OCT-1998; 98US-0103418P.  
 XX PR 16-AUG-1999; 99US-00374958.  
 XX PA (STYC) STRYKER CORP.  
 XX PI Oppermann H, Tai M, McCartney J;  
 XX DR WPI; 2000-303787/26.  
 XX PT Transforming growth factor-beta superfamily member mutant induces tissue  
 PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
 PT tissue and connective tissue and comprises a substitution in a region of  
 PT the finger 2 domain.  
 XX PS Claim 51; Page 155-156; 162pp; English.  
 XX CC The invention relates to mutant TGF-beta (transforming growth factor-

CC beta) superfamily members. These mutants comprise one or more amino acid  
CC substitutions in the base region of the finger 2 subdomain, and a C-  
CC terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
CC 2 subdomain, basic residues (e.g., Arg, Lys) or residues containing an  
CC amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
CC Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
CC beta superfamily proteins regulate developmental processes and include  
CC proteins such as the osteogenic proteins (Ops), bone morphogenetic  
CC proteins (Bmps), growth/differentiation factors (GDFs) and inhibitors.  
CC Specific examples of TGF-beta superfamily mutants encompassed by the  
CC invention are the finger 2 subdomain mutants of human osteogenic protein-  
CC 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
CC inducing tissue morphogenesis in bone, non-mineralised skeletal tissue,  
CC dental tissue, connective tissue, brain, liver and nerve tissue. The  
CC proteins can be used in conjunction with a biocompatible matrix e.g.,  
CC collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
CC cartilage and/or other mineralised skeletal or connective tissues e.g.,  
CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
CC damaged mammalian tissue and to prevent or substantially inhibit  
CC immune/inflammatory response-mediated tissue damage and scar tissue  
CC formation following an injury. Compared to the wild-type TGF-beta  
CC superfamily members, the mutant proteins have improved in vitro refolding  
CC and improved stability and/or activity. Sequences AAB09547-B09548 and  
CC AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
CC protein-1 (OP-1)  
XX  
SQ Sequence 117 AA;  
XX  
Query Match 100.0%; Score 111; DB 3; Length 117;  
Best Local Similarity 100.0%; Pred. No. 5.2e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
DY 1 INPETHVPCPCAPTOLNALS 20  
DB 72 INPETHVPCPCAPTOLNALS 91  
XX  
RESULT 30  
AAB02814  
ID AAB02814 standard; protein; 117 AA.  
XX  
AC AAB02814;  
XX  
XX 22-AUG-2000 (first entry)  
XX  
DE Human trypsin truncated H2223 mutant amino acid sequence SEQ ID NO:69.  
XX  
KM Tumour growth factor beta; TGF-beta; morphogenic protein; BMP; OP;  
KM bone morphogenic protein; osteogenic protein; mutant; modified;  
KM finger 2 sub-domain; finger 1 domain; heel domain; chimeric protein;  
KM osteogenic; proliferative; antiinflammatory; tissue morphogenesis;  
KM tissue repair; regeneration; proliferation; differentiation.  
XX  
XX Homo sapiens.  
OS Synthetic.  
OS  
PN WO200020591-A2.  
XX  
PD 13-APR-2000.  
XX  
XX 07-OCT-1999; 99WO-US023370.  
XX  
XX 07-OCT-1998; 98US-0103418P.  
PR 16-AUG-1999; 99US-00374936.  
XX  
XX (STYC ) STRYKER CORP.  
PA  
XX Opfermann H, Tai M, McCartney J;  
PI  
XX WPI; 2000-303776/26.  
XX

PT Novel TGF-beta superfamily mutant chimeric protein, useful for inducing  
PT tissue morphogenesis in e.g. bone, comprises a dimer consisting of one  
PT monomer containing domains from two family members.  
XX  
XX Disclosure; Page 142-143; 149pp; English.  
XX  
XX The present invention describes a tumour growth factor beta (TGF-beta)  
CC superfamily chimeric protein (I) derived from at least 2 different  
CC members of the superfamily comprising a dimer with one monomer that  
CC contains a finger 2 domain derived from a first family member and a  
CC finger 1 domain and heel domain, both derived from a second family  
CC member. The monomer further comprises a conserved C-terminal cysteine  
CC skeleton. (I) has osteogenic, proliferative and antiinflammatory  
CC activities. The TGF-beta superfamily chimeric proteins (I) are useful for  
CC inducing tissue morphogenesis (i.e. molecules capable of tissue repair  
CC and regeneration and/or inhibiting inflammation) in bone, non-mineralised  
CC skeletal tissue, dental tissue, connective tissue, brain, liver and nerve  
CC and for inducing the proliferation and differentiation of uncommitted  
CC progenitor cells in a tissue-specific manner to support new tissue  
CC formation. AAB29887 to AAB29897 and AAB02748 to AAB02824 represent  
CC sequences used in the exemplification of the present invention  
XX  
SQ Sequence 117 AA;  
XX  
Query Match 100.0%; Score 111; DB 3; Length 117;  
Best Local Similarity 100.0%; Pred. No. 5.2e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
DY 1 INPETHVPCPCAPTOLNALS 20  
DB 72 INPETHVPCPCAPTOLNALS 91  
XX  
RESULT 31  
AAB53364  
ID AAB53364 standard; protein; 119 AA.  
XX  
AC AAB53364;  
XX  
XX 25-MAR-2003 (revised)  
DT 01-JUL-2002 (revised)  
DT 06-JUN-1994 (first entry)  
XX  
XX N-terminally truncated osteogenic protein OP1 (OP1-16leu).  
DE  
XX  
KM Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;  
KM vascularisation; mineralisation; differentiation.  
XX  
XX Homo sapiens.  
OS  
PN US5266683-A.  
XX  
PD 30-NOV-1993.  
XX  
XX 21-FEB-1992; 92US-00841646.  
XX  
XX 09-APR-1988; 88US-00179406.  
PR 15-AUG-1988; 88US-00232630.  
PR 23-FEB-1989; 89US-00315342.  
PR 17-OCT-1989; 89US-00422613.  
PR 17-OCT-1989; 89US-00422699.  
PR 22-FEB-1990; 90US-00483913.  
PR 20-SEP-1990; 90US-00568920.  
PR 07-SEP-1990; 90US-00579865.  
PR 18-OCT-1990; 90US-00599543.  
PR 18-OCT-1990; 90US-00600024.  
PR 21-NOV-1990; 90US-00616374.  
PR 04-DEC-1990; 90US-00621849.  
PR 04-DEC-1990; 90US-00621988.  
PR 22-FEB-1991; 91US-00660162.  
PR 20-DEC-1991; 91US-00810560.  
PR 28-JAN-1992; 92US-00827052.  
XX

PA (STYC) STRYKER CORP.  
PI Kuberampath T, Ozkaynak E, Rueger DC, Pang RHL, Oppermann H;  
XX WPI; 1993-395405/49.  
DR N-PSDB; AA053141.  
XX  
PT New pure mammalian osteogenic proteins - induce cartilage and  
endochondral bone formation when in association with a matrix.  
XX  
PS Claim 11; Col 69-72; 128pp; English.  
XX  
CC This sequence is a fragment of the osteogenic protein OPI and is  
designated OPI-16Leu. The osteogenic protein when in association with a  
matrix can induce at the locus of an implant the full development cascade  
of endochondral bone formation including vascularisation, mineralisation  
and bone marrow differentiation. The osteogenic protein can also be used  
to repair both bone and cartilage in the treatment of osteoarthritis.  
CC (Updated on 01-JUL-2002 to add missing PA field.) (Updated on 25-MAR-2003  
to correct PR field.) (Updated on 25-MAR-2003 to correct PR field.)  
XX  
SQ Sequence 119 AA;  
Query Match 100.0%; Score 111; DB 2; Length 119;  
Best Local Similarity 100.0%; Pred. No. 5.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
OY 1 INPETHKPCCAPTQNLNALS 20  
Db 74 INPETHKPCCAPTQNLNALS 93  
RESULT 32  
AAW95451 standard; protein; 119 AA.  
XX  
AC AAW95451;  
XX  
DT 26-MAR-1999 (first entry)  
XX  
DE N-terminally truncated mature human OPI, OPI-16Leu (residues 300-431).  
XX  
KW Cystic kidney disease; renal; therapeutic; osteogenic protein; OP;  
KW bone morphogenic protein; BMP; growth factor-beta superfamily;  
KW polycystic kidney disease; multicystic dysplastic kidney disease;  
KW uraemic medullary cystic disease; human; OPI; truncated.  
XX  
OS Homo sapiens.  
XX  
PN W09850061-A1.  
XX  
PD 12-NOV-1998.  
XX  
PF 06-MAY-1998; 98WC-US0009268.  
XX  
PR 07-MAY-1997; 97US-0045909P.  
XX  
PA (BIOJ) BIOGEN INC.  
XX  
PI Gjoerstrup P, Harris R;  
XX  
DR WPI; 1999-070084/06.  
XX  
PT Treating cystic kidney disease - using renal therapeutic agents or  
sequences encoding them, especially from the osteogenic protein/bone  
morphogenic protein family.  
XX  
PS Claim 4; Page; 67pp; English.  
XX  
CC The invention relates to methods for treating cystic kidney diseases. The  
CC method comprises administering an effective amount of a renal therapeutic  
agent or a polynucleotide encoding the therapeutic agent. The therapeutic  
agent is preferably a soluble or membrane bound polypeptide, e.g. a

CC member of the osteogenic protein/bone morphogenic protein (OP/BMP) family  
CC within a transforming growth factor-beta superfamily of proteins. It is  
CC especially one of the polypeptides hOP1, hOP1-PP, OPI-18Ser, OPS, OP7,  
CC OPI-16Ser, OPI-16Leu, OPI-16Met, OPI-16Ala, OPI-16Val, hOP1-PP,  
CC hOP2, hOP2-PP, hOP2-Pro, hOP2-Arg, or hOP2-Ser or their  
CC biologically active homologues. The method is used to treat humans  
CC having, or at risk of, cystic kidney disease, e.g. autosomal recessive  
CC (infantile) polycystic disease, multicystic dysplastic kidney disease,  
CC uraemic medullary cystic disease, and autosomal dominant polycystic  
CC kidney disease. The present sequence represents a N-terminally truncated  
CC mature human osteogenic protein 1 (OPI) that can be used as a therapeutic  
CC agent in the method of the invention. Note: This sequence is not provided  
CC in the specification. It has been derived from the human OPI sequence  
CC (AAW95448) obtained from U.S. Patent No. 5,266,683  
XX  
SQ Sequence 119 AA;  
Query Match 100.0%; Score 111; DB 2; Length 119;  
Best Local Similarity 100.0%; Pred. No. 5.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
OY 1 INPETHKPCCAPTQNLNALS 20  
Db 74 INPETHKPCCAPTQNLNALS 93  
RESULT 33  
ABG76026 standard; protein; 119 AA.  
XX  
AC ABG76026;  
XX  
DT 30-APR-2003 (first entry)  
XX  
DE Human OP-1 C-terminus.  
XX  
KW GDF-5; growth differentiation factor 5; TGF-beta; human; OP-1;  
KW transforming growth factor beta; skeletal development; endometriosis;  
KW cartilage differentiation; cell proliferative disease; uterine tumour;  
KW bone dysplasia; spondyloepiphyseal dysplasia; achondroplasia;  
KW dysplasia epiphysealis; metaphyseal dysostosis; hyperchondroplasia;  
KW enchondromatosis; hypophosphatasia; osteopetrosis; hyperphosphatasia;  
KW craniofacial dysplasia; osteogenesis imperfecta; transgenic;  
KW idiopathic osteoporosis; Engelmann's disease.  
XX  
OS Homo sapiens.  
XX  
PN US2002165361-A1.  
XX  
PD 07-NOV-2002.  
XX  
PF 12-JUN-2001; 2001US-00880708.  
XX  
PR 12-JAN-1993; 93US-00003144.  
XX  
PR 12-JAN-1994; 94WC-US000657.  
XX  
PR 31-MAY-1995; 95US-00455559.  
XX  
PR 01-SEP-1998; 98US-00145060.  
XX  
PA (LEBS/) LEE S.  
XX  
PI (HUYN/) HUYNH T.  
XX  
PI Lee S, Huynh T;  
XX  
DR WPI; 2003-255226/25.  
XX  
PT New antibody specifically binding to a GDF-5 polypeptide, useful for  
diagnosing and treating cell proliferative disorders with aberrant GDF-5  
activity, such as endometriosis, uterine tumors and those involving  
skeletal tissues.  
XX  
PS Example 2; Fig 3A; 36pp; English.  
XX  
CC The invention relates to an antibody that specifically binds to growth



CC differentiation factor-5 (GDF-5, a member of the TGF-beta (transforming  
 CC growth factor beta) superfamily of proteins) polypeptide appearing as  
 CC AB076018. In order to determine the biological activity of GDF-5 in vivo,  
 CC transgenic mice were constructed that express GDF-5 ectopically. Analysis  
 CC of two independent transgenic mouse lines showed that these animals have  
 CC ectopic bone formation with evident muscle tissue. This showed that GDF-5  
 CC was capable of inducing bone formation in vivo. The antibody is useful  
 CC for the diagnosis and treatment of cell proliferative disorders  
 CC associated with aberrant GDF-5 activity, such as endometriosis, uterine  
 CC tumors, those involving skeletal tissues, endometritis, cartilage  
 CC differentiation, cell proliferative disease, uterine tumour, bone  
 CC dysplasia, spondylophyseal dysplasia, achondroplasia, dysplasia  
 CC epiphyseal, metaphyseal dysostosis, hyperchondroplasia,  
 CC enchondromatosis, hypophosphatasia, osteopetrosis, hyperphosphatasia,  
 CC craniometaphyseal dysplasia, osteogenesis imperfecta, idiopathic  
 CC osteoporosis and Engelmann's disease. The present sequence represents a  
 CC member of the TGFbeta superfamily used to determine regions of sequence  
 CC similarity for design of degenerate primers for isolation of GDF-5  
 CC  
 XX Sequence 119 AA;

Query Match 100.0%; Score 111; DB 6; Length 119;  
 Best Local Similarity 100.0%; Pred. No. 5.3e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHPKPCCAPTQLNALS 20  
 |||||  
 Db 74 INPETHPKPCCAPTQLNALS 93

RESULT 34  
 ABB07963 standard; protein; 131 AA.

AC ABB07963;  
 DT 12-AUG-2002 (first entry)  
 XX Human BMP7 with enterokinase recognition sequence.  
 DE Human BMP7 with enterokinase recognition sequence.  
 XX Osteogenesis; drug delivery system; DDS; collagen; osteopathic; human;  
 KM BMP7; enterokinase.  
 KW Homo sapiens.  
 OS Homo sapiens.  
 PN JP2002058485-A.  
 PD 26-FEB-2002.

PF 16-AUG-2000; 2000JP-00246744.  
 PR 16-AUG-2000; 2000JP-00246744.

PA (TERU) TERUMO CORP.  
 DR WPI: 2002-438612/47.  
 DR N-PSDB; ABL41026.

XX Novel osteogenesis stimulating fused protein having collagen avidity used  
 PT as an osteogenesis stimulator and a localizing agent.  
 PS Disclosure; Page 22; 30pp; Japanese.

CC The invention provides an osteogenesis stimulating fused protein (I) for  
 CC a drug delivery system (DDS) of osteogenic factor, having collagen  
 CC avidity and polypeptides homologous to collagen avidity domain or its  
 CC modified peptides. (I) is used for stimulation of osteogenesis, a  
 CC localizing agent and a slow releasing agent for a drug delivery system.  
 CC The present sequence represents the human BMP7 with enterokinase  
 CC recognition sequence  
 XX  
 SQ Sequence 131 AA;

Query Match 100.0%; Score 111; DB 5; Length 131;  
 Best Local Similarity 100.0%; Pred. No. 5.8e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHPKPCCAPTQLNALS 20  
 |||||  
 Db 86 INPETHPKPCCAPTQLNALS 105

RESULT 35  
 AAR53365 standard; protein; 132 AA.

AC AAR53365;  
 DT 25-MAR-2003 (revised)  
 DT 01-JUL-2002 (revised)  
 DT 06-JUN-1994 (first entry)

DE N-terminally truncated osteogenic protein OPI (OPI-16ser).

KW Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;  
 KM vascularisation; mineralisation; differentiation.

OS Homo sapiens.

PN US5266683-A.  
 PD 30-NOV-1993.

PF 21-FEB-1992; 92US-00841646.

PR 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.

PA (STYC) STRYKER CORP.

PI Kuberaasampath T, Ozkaynak E, Rueger DC, Pang RH, Oppermann H;

DR WPI: 1993-395405/49.  
 DR N-PSDB; AAO53141.

PT New pure mammalian osteogenic protein - induce cartilage and  
 PT endochondral bone formation when in association with a matrix.

PS Claim 12; Col 69-72; 128pp; English.

CC This sequence is a fragment of the osteogenic protein OPI and is  
 CC designated OPI-16ser. The osteogenic protein when in association with a  
 CC matrix can induce at the locus of an implant the full development cascade  
 CC of endochondral bone formation including vascularisation, mineralisation  
 CC and bone marrow differentiation. The osteogenic protein can also be used  
 CC to repair both bone and cartilage in the treatment of osteoarthritis.  
 CC (Updated on 01-JUL-2002 to add missing PA field.) (Updated on 25-MAR-2003  
 CC to correct PF field.) (Updated on 25-MAR-2003 to correct PR field.)  
 XX  
 SQ Sequence 132 AA;

Query Match 100.0%; Score 111; DB 2; Length 132;

Best Local Similarity 100.0%; Pred. No. 5.8e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNAIS 20  
DB 87 INPETHKPCCAPTOLNAIS 106

RESULT 36

AAW95450  
ID AAW95450 standard; protein; 132 AA.

XX AAW95450;

DT 26-MAR-1999 (first entry)

DE N-terminally truncated mature human OPI, OPI-16Ser (residues 330-431).

XX Cystic kidney disease; renal; therapeutic; osteogenic protein; OP;  
XX bone morphogenic protein; BMP; growth factor-beta superfamily;  
XX polycystic kidney disease; multicystic dysplastic kidney disease;  
XX uremic medullary cystic disease; human; OPI; truncated.

XX Homo sapiens.

XX W09850061-A1.

XX 12-NOV-1998.

XX 06-MAY-1998; 98WO-US009268.

XX 07-MAY-1997; 97US-0045909P.

XX (BIOJ) BIOGEN INC.

XX GJorstrup P, Harris R;

XX WPI: 1999-070084/06.

PT Treating cystic kidney disease - using renal therapeutic agents or  
PT sequences encoding them, especially from the osteogenic protein/bone  
PT morphogenic protein family.

XX Claim 4; Page: 67pp; English.

CC The invention relates to methods for treating cystic kidney diseases. The  
CC method comprises administering an effective amount of a renal therapeutic  
CC agent or a polynucleotide encoding the therapeutic agent. The therapeutic  
CC agent is preferably a soluble or membrane bound polypeptide, e.g. a  
CC member of the osteogenic protein/bone morphogenic protein (OP/BMP) family  
CC within a transforming growth factor-beta superfamily of proteins. It is  
CC especially one of the polypeptides hOP1, hOP1-PP, OPI-16Ser, OPS, OP7,  
CC OPI-16Ser, OPI-16Leu, OPI-16Val, OPI-16Ala, hOP2-PP, hOP2-PP, hOP2-PP,  
CC hOP2, hOP2-PP, hOP2-Ala, hOP2-Pro, hOP2-Arg, or hOP2-Ser or their  
CC biologically active homologues. The method is used to treat humans  
CC having, or at risk of, cystic kidney disease, e.g. autosomal recessive  
CC (infantile) polycystic disease, multicystic dysplastic kidney disease,  
CC uremic medullary cystic disease, and autosomal dominant polycystic  
CC kidney disease. The present sequence represents a N-terminally truncated  
CC mature human osteogenic protein 1 (OPI) that can be used as a therapeutic  
CC agent in the method of the invention. Note: This sequence is not provided  
CC in the specification. It has been derived from the human OPI sequence  
CC (AAW95448) obtained from U.S. Patent No. 5,266,683

XX Sequence 132 AA;

Query Match 100.0%; Score 111; DB 2; Length 132;  
Best Local Similarity 100.0%; Pred. No. 5.8e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNAIS 20  
DB 87 INPETHKPCCAPTOLNAIS 106

RESULT 37

AAI08297  
ID AAI08297 standard; protein; 138 AA.

XX AAI08297;

DT 14-JUL-1999 (first entry)

DE Human growth factor protein fragment BMP-7.

XX Growth factor; human; dimer; cysteine knot; cellular inclusion body;  
XX pharmaceutical.

XX Homo sapiens.

XX DE19748734-A1.

XX 06-MAY-1999.

XX 05-NOV-1997; 97DE-01048734.

XX 05-NOV-1997; 97DE-01048734.

XX (GBFB) GBS BIOTECHNOLOGISCHE FORSCHUNG MBH.

XX Kaerst U, Mueller C, Rinas U, Welch H, Erdmann H;

XX WPI: 1999-278785/24.

PT Preparing active growth factor dimers from inclusion bodies in high  
PT yield.

XX Claim 14; Page 11; 14pp; German.

CC This invention describes the novel preparation of biologically active  
CC dimers of recombinant human growth factors of the cysteine knot family  
CC starting from cellular inclusion bodies. Such dimers are useful in  
CC pharmaceutical compositions and the method provides yields of 31-39.7%,  
CC in examples, compared with about 10% for the conventional method (see  
CC Biochemistry, 28 (1989) 2956). AAI08278-Y08301 are human growth factor  
CC protein fragments used in the method of the invention

XX Sequence 138 AA;

Query Match 100.0%; Score 111; DB 2; Length 138;  
Best Local Similarity 100.0%; Pred. No. 6.1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNAIS 20  
DB 93 INPETHKPCCAPTOLNAIS 112

RESULT 38

AAK23187  
ID AAK23187 standard; protein; 139 AA.

XX AAK23187;

DT 27-AUG-2003 (revised)

DT 01-JAN-1980 (first entry)

DE Osteogenic protein for dispersal in implantable osteogenic device.

XX Osteogenic; implant; endochondral; bone; OPI.

XX Mammalia.

XX W09118558-A.

XX 12-DEC-1991.

XX 29-MAY-1990; 90US-00529852.  
 XX 29-MAY-1990; 90US-00529852.  
 PR (CREA-) CREATIVE BIOMOLECULES INC.  
 XX Kuberamp T, Berlowitz TL;  
 XX WPI, 1992-007153/01.  
 DR Osteogenic device for implantation - comprising osteogenic protein  
 XX dispersed in porous matrix of collagen and glycosaminoglycan.  
 XX Claim 8; Page 34; 39pp; English.  
 XX The invention relates to an implantable device for inducing endochondral  
 CC bone formation in a shape conforming to the shape of the device. The  
 CC device comprises an osteogenic protein dispersed in a porous matrix which  
 CC is a polymer of collagen and glycosaminoglycan crosslinked to an Mc value  
 CC of 800 to 60,000. The osteogenic protein comprises a pair of subunits  
 CC constituting a stable dimer under oxidising conditions. The present  
 CC sequence (designated OPI), when dimerised to form a homodimer or a  
 CC heterodimer with certain other protein sequences, can induce endochondral  
 CC bone formation and hence is preferred as one of the pair of subunits.  
 CC (Updated on 27-AUG-2003 to correct OS field.)  
 CC  
 XX Sequence 139 AA;  
 XX  
 XX Query Match 100.0%; Score 111; DB 2; Length 139;  
 XX Best Local Similarity 100.0%; Pred. No. 6.1e-07;  
 XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTOLNAIS 20  
 Db 94 INPETHKPCCAPTOLNAIS 113  
 XX  
 XX RESULT 39  
 XX AAR27285 standard; protein; 139 AA.  
 XX AAR27285;  
 XX 25-MAR-2003 (revised)  
 XX 26-FEB-1993 (first entry)  
 XX Mature human osteogenic protein hOPI.  
 XX Morphogen; morphogenic protein.  
 XX Homo sapiens.  
 XX Key Location/Qualifiers  
 XX Region 38..139  
 XX /note="conserved seven cysteine skeleton"  
 XX WO9215323-A1.  
 XX 17-SEP-1992.  
 XX 11-MAR-1992; 92WO-US001968.  
 XX 11-MAR-1991; 91US-00667274.  
 XX (CREA-) CREATIVE BIOMOLECULES INC.  
 XX Cohen CM, Kuberampath T, Pang RHL, Oppermann H, Rueger DC;  
 XX WPI, 1992-331475/40.  
 XX Compans, for increasing progenitor cell population - contain a morphogen  
 XX to induce proliferation, useful for inhibiting neoplastic growth.  
 XX

PT Inducing tissue repair and in diagnosis of tissue dysfunction.  
 XX Claim 11; Page 82-83; 132pp; English.  
 XX Mature hOPI is one of the preferred known morphogens which can be used in  
 CC the manufacture of pharmaceuticals for inducing non-chondrogenic  
 CC mammalian tissue growth, progenitor cell proliferation and hepatic tissue  
 CC growth and for maintaining the phenotypic expression of differentiated  
 CC cells in a mammal. Morphogens sharing at least 70% homology with hOPI or  
 CC at least 65% identity with residues 43-139 of hOPI are included. (Updated  
 CC on 25-MAR-2003 to correct PN field.)  
 XX  
 XX Sequence 139 AA;  
 XX  
 XX Query Match 100.0%; Score 111; DB 2; Length 139;  
 XX Best Local Similarity 100.0%; Pred. No. 6.1e-07;  
 XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTOLNAIS 20  
 Db 94 INPETHKPCCAPTOLNAIS 113  
 XX  
 XX RESULT 40  
 XX AAR3366 standard; protein; 139 AA.  
 XX AAR3366;  
 XX 25-MAR-2003 (revised)  
 XX 01-JUL-2002 (revised)  
 XX 06-JUN-1994 (first entry)  
 XX N-terminally truncated osteogenic protein OPI (OPI-18Ser).  
 XX Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;  
 XX vascularisation; mineralisation; differentiation.  
 XX Homo sapiens.  
 XX US5266683-A.  
 XX 30-NOV-1993.  
 XX 21-FEB-1992; 92US-00841646.  
 XX 08-APR-1988; 88US-00179406.  
 XX 15-AUG-1988; 88US-00232630.  
 XX 23-FEB-1989; 89US-00315342.  
 XX 17-OCT-1988; 89US-00422613.  
 XX 17-OCT-1989; 89US-00422613.  
 XX 22-FEB-1990; 90US-00483913.  
 XX 20-AUG-1990; 90US-00569920.  
 XX 07-SEP-1990; 90US-00579865.  
 XX 18-OCT-1990; 90US-00599543.  
 XX 18-OCT-1990; 90US-00600024.  
 XX 21-NOV-1990; 90US-00616374.  
 XX 04-DEC-1990; 90US-00621849.  
 XX 04-DEC-1990; 90US-00621988.  
 XX 22-FEB-1991; 91US-00660162.  
 XX 20-DEC-1991; 91US-00810560.  
 XX 28-JAN-1992; 92US-00827052.  
 XX (STYC) STRYKER CORP.  
 XX Kuberampath T, Ozkaynak E, Rueger DC, Pang RHL, Oppermann H;  
 XX WPI, 1993-395405/49.  
 XX N-PSDB; AA053141.  
 XX New pure mammalian osteogenic proteins - induce cartilage and  
 XX endochondral bone formation when in association with a matrix.  
 XX

PS Claim 13; Col 69-72; 128pp; English.

XX This sequence is a fragment of the osteogenic protein Opl and is  
 CC designated Opl-189ser. The osteogenic protein when in association with a  
 CC matrix can induce at the locus of an implant the full development cascade  
 CC of endochondral bone formation including vascularisation, mineralisation  
 CC and bone marrow differentiation. The osteogenic protein can also be used  
 CC to repair both bone and cartilage in the treatment of osteoarthritis.  
 CC (Updated on 01-JUL-2002 to add missing PA field.) (Updated on 25-MAR-2003  
 CC to correct PF field.) (Updated on 25-MAR-2003 to correct PR field.)

SC Sequence 139 AA;

Query Match 100.0%; Score 111; DB 2; Length 139;  
 Best Local Similarity 100.0%; Pred. No. 6, 1e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQNLNALS 20  
 DB 94 INPETYKPCCAPTQNLNALS 113

RESULT 41  
 AAR33921  
 ID AAR33921 standard; protein; 139 AA.  
 AC AAR33921;  
 XX  
 AC 25-MAR-2003 (revised)  
 DT 13-JUL-1993 (first entry)  
 XX  
 DE Morphogen hOP-1.  
 XX  
 KW Morphogen; homodimer; stimulate; proliferation; progenitor cell;  
 KW differentiation; growth; redifferentiation; transformation; human; mouse;  
 KM Drosophila; Xenopus; committed cells.  
 XX  
 OS Homo sapiens.  
 XX  
 PN W09305172-A1.  
 XX  
 PD 18-MAR-1993.  
 XX  
 XX 28-AUG-1992; 92MO-US007359.  
 XX  
 XX 30-AUG-1991; 91US-00752861.  
 XX  
 XX (CREA-) CREATIVE BIOMOLECULES INC.  
 PA  
 PI Smart JE, Oppermann H, Ozkaynak E, Kuberassampath T, Rueger DC;  
 PI Pang RHL, Cohen CM;  
 DR WP1; 1993-100993/12.  
 XX  
 XX Screening cpds. to determine ability to modulate effective concn. of a  
 PT morphogen - by assaying test tissue type cells for parameter indicative  
 PT of a prodn. level change of morphogen.  
 XX  
 XX Disclosure; Page 73-74; 132pp; English.  
 PS The sequences given in AAR33921-30 are morphogens derived from human,  
 CC CC Drosophila, Xenopus and murine sources. These morphogens are inactive  
 CC when reduced but are active as oxidised homodimers and when oxidised in  
 CC combination with other morphogens. These morphogens are capable of  
 CC stimulating proliferation of progenitor cell, stimulating the  
 CC differentiation of progenitor cells, stimulating the proliferation of  
 CC differentiated cells and supporting the growth and maintenance of  
 CC differentiated cells, including the redifferentiation of transformed  
 CC cells. These morphogens may also be capable of inducing redifferen-  
 CC tiation of committed cells under appropriate environmental conditions.  
 CC (Updated on 25-MAR-2003 to correct PN field.)  
 CC  
 XX Sequence 139 AA;

Query Match 100.0%; Score 111; DB 2; Length 139;  
 Best Local Similarity 100.0%; Pred. No. 6, 1e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQNLNALS 20  
 DB 94 INPETYKPCCAPTQNLNALS 113

RESULT 42  
 AAR33998  
 ID AAR33998 standard; protein; 139 AA.  
 AC AAR33998;  
 XX  
 AC 25-MAR-2003 (revised)  
 DT 15-JUL-1993 (first entry)  
 XX  
 DE Human mature OP-1.  
 XX  
 KW morphogenic; osteogenic protein; developmental cascade; human OP-1;  
 KW hOP-1; mouse OP-1; hOP-2; hOP-2; BMP2A; BMP2B; Drosophila DPP;  
 KW decapentaplegic; Xenopus Vgl; mouse Vgr-1; GDF-1; BMP3; BMP6; BMP6;  
 KW morphogen 60(A); inflammation; anti-inflammatory;  
 KW Transforming Growth Factor; TGF-beta super-family.  
 XX  
 OS Homo sapiens.  
 XX  
 AC Key Location/Qualifiers  
 FH Region 43..139  
 FT /label=C-terminal region  
 FT /note="contains conserved 6 Cys skeleton"

XX W09304692-A1.  
 XX  
 PD 18-MAR-1993.  
 XX  
 XX 28-AUG-1992; 92MO-US007358.  
 XX  
 XX 30-AUG-1991; 91US-00752764.  
 XX  
 XX 30-AUG-1991; 91US-00752861.  
 XX  
 XX 30-AUG-1991; 91US-00753059.  
 XX  
 XX (CREA-) CREATIVE BIOMOLECULES INC.  
 PA  
 PI Kuberassampath T, Pang RHL, Oppermann H, Rueger DC, Cohen CM;  
 PI .ozkaynak E, Smart JE;  
 DR WP1; 1993-100652/12.  
 XX  
 XX Morphogen-induced modulation of inflammatory response - and resulting  
 PT tissue damage, e.g. in autoimmune diseases, diabetes, asthma, ischaemia  
 PT reperfusion injury, etc.  
 XX  
 XX Claim 30; Page 102; 165pp; English.  
 XX  
 XX Human osteogenic protein (OP)-1 is a preferred morphogen for use in  
 CC treating tissue damage in e.g. inflammatory disease, autoimmune disease,  
 CC arthritis, psoriasis, dermatitis, diabetes and emphysema. Proteins having  
 CC at least 60% homology with amino acids 43-139 of hOP-1 can also be used.  
 CC (Updated on 25-MAR-2003 to correct PN field.)  
 CC  
 XX Sequence 139 AA;

Query Match 100.0%; Score 111; DB 2; Length 139;  
 Best Local Similarity 100.0%; Pred. No. 6, 1e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQNLNALS 20  
 DB 94 INPETYKPCCAPTQNLNALS 113

RESULT 43  
AA031467  
ID AAR31467 standard; protein, 139 AA.  
XX  
XX AAR31467;  
XX  
XX 25-MAR-2003 (revised)  
XX 26-MAR-1993 (first entry)  
XX  
XX Mature P3 OF 31-34 subunit D.  
XX  
XX Subunit; D; B; C; P3 OF 31-34; osteogenic; active; protein; bone;  
XX heterodimer; disulphide bond; formation; repair; defect.  
XX  
XX Homo sapiens.  
XX  
XX W09300049-A1.  
XX  
XX 07-JAN-1993.  
XX  
XX 01-JUL-1991; 91WO-US004686.  
XX  
XX 20-JUN-1991; 91US-00718274.  
XX  
XX (XOMA ) XOMA CORP.  
XX  
XX Grima L, Theofan G, Parsons TF;  
XX  
XX WPI; 1993-036101/04.  
XX  
XX N-PSDB; AAQ34514.  
XX  
XX Osteogenically active protein preparations for repairing bone defects -  
XX comprise hetero-dimer of P3 OF 31-34 sub-unit B and P3 OF 31-34 sub-unit  
XX D.  
XX  
XX Disclosure; Page 60; 107pp; English.  
XX  
XX The sequences given in AAR31467-69 represent the subunits D, B and C of  
XX P3 OF 31-34, respectively. P3 OF 31-34 is an osteogenically active  
XX protein. A primary osteogenically active peptide is formed of a  
XX heterodimer of P3 OF 31-34 subunits B and D which are linked by at least  
XX one disulphide bond. The B/D heterodimer stimulates osteo- genesis and  
XX can be used to induce bone formation in mammals, to repair bone defects.  
XX (Updated on 25-MAR-2003 to correct FN field.)  
XX  
XX Sequence 139 AA;  
SQ  
Query Match 100.0%; Score 111; DB 2; Length 139;  
Best Local Similarity 100.0%; Pred. No. 6,1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTQLNALS 20  
DB 94 INPETHKPCCAPTQLNALS 113  
RESULT 44  
AAR46724  
ID AAR46724 standard; protein, 139 AA.  
XX  
XX AAR46724;  
XX  
XX 25-MAR-2003 (revised)  
XX 25-AUG-1994 (first entry)  
XX  
XX Human mature osteogenic protein hOP1.  
XX  
XX human osteogenic protein; hOP1; morphogen; infant food formulation;  
XX tissue morphogenesis; tissue development; bone growth;  
XX morphogen-enriched nutritional product.  
XX  
XX Homo sapiens.  
OS

XX  
XX W09403075-A2.  
XX  
XX 17-FEB-1994.  
XX  
XX 29-JUL-1993; 93WO-US007190.  
XX  
XX 31-JUL-1992; 92US-00923780.  
XX 16-SEP-1992; 92US-00946235.  
XX 04-MAR-1993; 93US-00029335.  
XX 31-MAR-1993; 93US-00040510.  
XX  
XX (CREA-) CREATIVE BIOMOLECULES INC.  
XX  
XX Kuberassampath T, Cohen CM, Rueger DC, Oppermann H, Pang RHL;  
XX  
XX WPI; 1994-065304/08.  
XX  
XX Morphogen enriched dietary compositions and infant formula - capable of  
XX enhancing tissue morphogenesis, development and viability, e.g. in  
XX infants, aged individuals and metabolic disorders, e.g. anorexia nervosa,  
XX etc.  
XX  
XX Claim 27; Page 100; 160pp; English.  
XX  
XX Human osteogenic protein hOP1 and proteins having at least 70% homology  
XX with it are preferred morphogens for inclusion in new morphogen-enriched  
XX nutritional formulations. The formulations are dietary compositions  
XX suitable for people at risk for tissue damage due to protein energy  
XX malnutrition or to altered metabolism function and infant formulations to  
XX enhance tissue development in an infant or juvenile. (Updated on 25-MAR-  
XX 2003 to correct FN field.)  
XX  
XX Sequence 139 AA;  
SQ  
Query Match 100.0%; Score 111; DB 2; Length 139;  
Best Local Similarity 100.0%; Pred. No. 6,1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTQLNALS 20  
DB 94 INPETHKPCCAPTQLNALS 113  
RESULT 45  
AAR60967  
ID AAR60967 standard; protein, 139 AA.  
XX  
XX AAR60967;  
XX  
XX 25-MAR-2003 (revised)  
XX 11-OCT-1994 (first entry)  
XX  
XX Mature human OP-1.  
XX  
XX OP-1; OP-2; CEMF2; Vg1(fx); Vgr(fx); DPP(fx); GDF-1(fx); 60A(fx);  
XX BMP3(fx); BMP5(fx); BMP6(fx); osteogenic protein; morphogen;  
XX morphogenic protein; morphogenesis; progenitor; differentiation;  
XX stimulation; Drosophila melanogaster; fruit fly.  
XX  
XX Homo sapiens.  
XX  
XX W09406447-A2.  
XX  
XX 31-MAR-1994.  
XX  
XX 15-SEP-1993; 93WO-US008741.  
XX  
XX 15-SEP-1992; 92US-00945292.  
XX 04-MAR-1993; 93US-00029335.  
XX 31-MAR-1993; 93US-00040510.  
XX  
XX (CREA-) CREATIVE BIOMOLECULES INC.  
PA



```

XX AC AAM00221;
XX
XX 21-NOV-1996 (first entry)
XX
XX Human mature osteogenic protein OP-1.
XX
XX Morphogen; osteogenic protein; dentine; tooth decay; caries;
XX morphogenesis; odontoblast; OP-1.
XX
XX Homo sapiens.
XX
XX Key Location/Qualifiers
XX 38..139
XX /label=C-terminal_domain
XX /note="7-cysteine domain of OP-1"
XX
XX W09626737-A1.
XX
XX 06-SEP-1996.
XX
XX 14-FEB-1996; 96WO-US002169.
XX
XX 01-MAR-1995; 95US-00396930.
XX
XX (CREA-) CREATIVE BIOMOLECULES INC.
XX
XX Charette MF, Rutherford RB;
XX WPI; 1996-412583/41.
XX
XX Use of morphogen(s), e.g. osteogenic proteins, on dental surfaces - for
XX inducing dentine morphogenesis, desensitising teeth or sealing tooth
XX cavities.
XX
XX Claim 28; Page 42; 106pp; English.
XX
XX
XX Human hippocampus osteogenic protein OP-1 (AAM00221) is a morphogenically
XX active dimeric protein having a C-terminal 7-cysteine domain that shares
XX a defined relationship with similar domains of other morphogenic proteins
XX (see also AAM00219-35). It comprises amino acids 293-431 of full-length
XX OP-1 (AAM00236), and can be expressed from intact or truncated cDNA (see
XX also AAT33441) in prokaryotic or eukaryotic host cells. OP-1 and other
XX morphogens are used to induce dentine morphogenesis, to seal dental
XX cavities and to desensitise teeth to pressure and/or temp
XX
XX Sequence 139 AA;
XX
XX Query Match 100.0%; Score 111; DB 2; Length 139;
XX Best Local Similarity 100.0%; Pred. No. 6.1e-07;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX 1 INPETHPKPCCAPTQLNIAIS 20
XX 94 INPETHPKPCCAPTQLNIAIS 113
XX
XX Db
XX
XX RESULT 49
XX AAM40180
XX ID AAM40180 standard; protein; 139 AA.
XX
XX AC AAM40180;
XX
XX 08-JUN-1998 (first entry)
XX
XX Human hOP1 mature protein.
XX
XX Osteogenic protein; OP-1; bone morphogenic protein; OP/BMP family;
XX chronic renal failure; renal therapeutic agent; diabetes; diabetes;
XX nephropathy; glomerulopathy; hypertrophy; sclerosis; nephritis; human;
XX dysplasia; fibrosis; glomerular filtration rate; GFR.
XX
XX Homo sapiens.
XX

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XX PN W09741861-A1.
XX
XX 13-NOV-1997.
XX
XX 06-MAY-1997; 97WO-US007816.
XX
XX 06-MAY-1996; 96US-00643321.
XX
XX (CREA-) CREATIVE BIOMOLECULES INC.
XX
XX Sampath KT, Cohen CM;
XX WPI; 1997-558690/51.
XX N-PSDB; AAV10345.
XX
XX Treatment of chronic renal failure - using an osteogenic protein/bone
XX morphogenetic protein renal therapeutic agent or morphogen or renal
XX mesenchymal progenitor cells.
XX
XX Disclosure; Page 44; 113pp; English.
XX
XX This sequence represents the mature human osteogenic protein, hOP-1. This
XX protein is used in a method for the treatment of a mammal having, or at
XX risk of, chronic renal failure which comprises administering an
XX osteogenic protein/bone morphogenetic protein (OP/BMP) renal therapeutic
XX agent or morphogen. The method can be used for treating e.g. chronic
XX renal failure, end-stage renal disease, chronic diabetic nephropathy,
XX diabetic glomerulopathy, diabetic renal hypertrophy, hypertensive
XX nephrosclerosis, hypertensive glomerulosclerosis, chronic
XX glomerulonephritis, hereditary nephritis, renal dysplasia, or a patient
XX afflicted with e.g. glomerular hypertrophy, tubular hypertrophy,
XX glomerulosclerosis, tubulointerstitial sclerosis or renal fibrosis. Such
XX therapeutic agents can prevent, inhibit or delay the progressive loss of
XX functional nephron units and the progressive decline in glomerular
XX filtration rate (GFR) which slowly but inevitably leads to the need for
XX renal replacement therapy
XX
XX Sequence 139 AA;
XX
XX Query Match 100.0%; Score 111; DB 2; Length 139;
XX Best Local Similarity 100.0%; Pred. No. 6.1e-07;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX 1 INPETHPKPCCAPTQLNIAIS 20
XX 94 INPETHPKPCCAPTQLNIAIS 113
XX
XX Db
XX
XX RESULT 50
XX AAM36871
XX ID AAM36871 standard; protein; 139 AA.
XX
XX AC AAM36871;
XX
XX 25-MAR-2003 (revised)
XX 10-MAR-1998 (first entry)
XX
XX Mature protein amino acid sequence of human osteogenic protein 1 (hOP-1).
XX
XX Human osteogenic protein; OP; OP-1; morphogen; morphogenic protein;
XX embryogenesis; organ maintenance; tissue-specific morphogenesis;
XX arthritis; emphysema; osteoporosis; cirrhosis.
XX
XX Homo sapiens.
XX
XX Key Location/Qualifiers
XX 38..139
XX /note="conserved 7 Cys skeleton"
XX
XX US5650276-A.
XX
XX 22-JUL-1997.
XX

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XX 20-JUN-1994; 94US-00278729.  
 PF 11-MAR-1991; 91US-00662774.  
 PR 30-AUG-1991; 91US-00752764.  
 PR 30-AUG-1991; 91US-00752861.  
 PR 28-AUG-1992; 92US-00938021.  
 XX  
 PA (CREA-) CREATIVE BIOMOLECULES INC.  
 XX  
 PI Ozkaynak E, Oppermann H, Pang RH, Cohen CM, Kuberaaampath T;  
 PI Rueger DC, Smart JE;  
 XX  
 DR WPI; 1997-384665/35.  
 DR N-PSDB; AAT97877.  
 PT Screening for compounds which modulate morphogen expression - by  
 PT incubating in the presence of epithelial cells which contain a cellular  
 PT gene for morphogenic protein expression.  
 XX  
 PS Claim 1; Col 35-36; 49pp; English.  
 CC The present sequence represents the mature protein of human osteogenic  
 CC protein-1 (hOP-1). hOP-1 was first found in bone tissue, and is now known  
 CC to be produced at relatively high levels in cells derived from renal or  
 CC adrenal tissue. OP-1 proteins are a group of morphogenetically active  
 CC proteins. Morphogens are inactive when reduced, but are active as  
 CC oxidised homodimers and when oxidised with other morphogens (e.g. as  
 CC AAW3654-62). Comparison of the amino acid sequences of these morphogens  
 CC has identified a consensus 6-7 cysteine motif at the C-terminal.  
 CC Morphogenic proteins such as OP-1 play an important role, not only in  
 CC embryogenesis, but also in tissue and organ maintenance and repair in  
 CC mammals. They induce a developmental cascade of tissue-specific  
 CC morphogenesis in a mammal. A novel method is described for screening a  
 CC candidate compound for the ability to modulate expression of a cellular  
 CC gene encoding a naturally occurring morphogenic protein. The candidate  
 CC compound is incubated with epithelial cells which express the cellular  
 CC gene, and after a period of time the epithelial cells are assayed for the  
 CC presence of or the amount of the protein expressed by the cellular gene.  
 CC A change in the level of the morphogenic protein relative to the level in  
 CC the epithelial cells in the absence of the candidate compound is  
 CC indicative of the ability of the compound to modulate expression of the  
 CC cellular gene. The method can be used to identify compounds which can  
 CC increase or decrease morphogen production or levels. Such compounds can  
 CC be used in the treatment of e.g. arthritis, emphysema, osteoporosis,  
 CC kidney disease, lung diseases, cardiomyopathy, and cirrhosis of the  
 CC liver. (Updated on 25-MAR-2003 to correct PR field.)  
 CC  
 XX  
 SQ Sequence 139 AA;  
 Query Match 100.0%; Score 111; DB 2; Length 139;  
 Best Local Similarity 100.0%; Pred. No. 6.1e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTQNLNAIS 20  
 DB 94 INPETHKPCCAPTQNLNAIS 113  
 RESULT 51  
 AAW54064  
 ID AAW54064 standard; protein; 139 AA.  
 XX  
 AC AAW54064;  
 XX  
 DT 25-MAR-2003 (revised)  
 DT 10-AUG-1998 (first entry)  
 XX  
 DE Bone morphogenetic protein-7.  
 XX  
 KW Bone morphogenetic protein-8; BMP-8; bone formation; cartilage formation;  
 KW bone disorder; cartilage injury; therapy; BMP-7.  
 XX

OS Mammalia.  
 XX  
 PN US5756308-A.  
 XX  
 PD 26-MAY-1998.  
 XX  
 PF 21-DEC-1994; 94US-00360914.  
 XX  
 PR 07-DEC-1993; 93US-00163877.  
 PR 15-NOV-1994; 94WO-US013181.  
 XX  
 PA (GENY) GENETICS INST INC.  
 XX  
 PI McCoy J, Wolfman NM;  
 PI WPI; 1998-321530/28.  
 DR N-PSDB; AAV24033.  
 XX  
 PT DNA encoding bone morphogenetic protein 8 mutant - yielding correctly  
 PT folded hetero:dimer(s).  
 XX  
 PS Disclosure; Col 25-26; 18pp; English.  
 CC This sequence is the bone morphogenetic protein-7 (BMP-7). A mutated  
 CC version of the BMP-8 DNA sequence, encoding a protein having Ser-63  
 CC replaced with His, is the BMP-8 DNA sequence of the invention. Bone  
 CC morphogenetic proteins are able to induce bone or cartilage formation and  
 CC are expected to be useful for treating bone or cartilage injuries or  
 CC disorders. Expression of the BMP-8 mutant DNA in bacterial cells yields  
 CC correctly folded BMP-2/8 heterodimers. (Updated on 25-MAR-2003 to correct  
 CC PR field.)  
 CC  
 XX  
 SQ Sequence 139 AA;  
 Query Match 100.0%; Score 111; DB 2; Length 139;  
 Best Local Similarity 100.0%; Pred. No. 6.1e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTQNLNAIS 20  
 DB 94 INPETHKPCCAPTQNLNAIS 113  
 RESULT 52  
 AAW84215  
 ID AAW84215 standard; protein; 139 AA.  
 XX  
 AC AAW84215;  
 XX  
 DT 25-MAR-1999 (first entry)  
 XX  
 DE Bone morphogenetic protein active fragment.  
 XX  
 KW Proteinase site; bone morphogenetic fusion protein; bone binding site;  
 KW bone morphogenetic protein; transforming growth factor beta;  
 KW active fragment; wound healing; bone growth; purification tag.  
 XX  
 OS Homo sapiens.  
 XX  
 PN W09855137-A1.  
 PD 10-DEC-1998.  
 XX  
 PF 02-JUN-1998; 98WO-US011189.  
 XX  
 PR 03-JUN-1997; 97US-00868452.  
 XX  
 PA (NIMN) NIMNI M E.  
 PA (HALU) HALU F L.  
 PA (WOLF) WOLF L.  
 PA (HANB) HAN B.  
 PA (SHOR) SHOR E C.  
 XX



PI Nimmi ME, Hall FL, Wu L, Han B, Shors EC;  
 XX WPI; 1999-059875/05.  
 DR N-PSDB; AAV99383.  
 XX New bone morphogenetic fusion proteins - comprising a purification tag  
 PT and a bone morphogenetic active fragment, used for enhancing wound  
 XX healing or bone growth.  
 PS Claim 14; Page 51-52; 64pp; English.  
 XX The present sequence represents a bone morphogenetic protein active  
 CC fragment, that was used in the creation of the bone morphogenetic fusion  
 CC proteins of the invention. The bone morphogenetic fusion protein may  
 CC contain some or all of the following elements: a purification tag, a  
 CC protease site, an ECM/bone binding site, a second protease site, and  
 CC a bone morphogenetic protein active fragment. The fusion proteins of the  
 CC invention also includes proteins that have transforming growth factor  
 CC beta active fragments instead of bone morphogenetic protein active  
 CC fragments. The bone morphogenetic fusion proteins can be used for  
 CC enhancing wound healing or bone growth  
 XX Sequence 139 AA;  
 SQ  
 Query Match 100.0%; Score 111; DB 2; Length 139;  
 Best Local Similarity 100.0%; Pred. No. 6.1e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTOLNAIS 20  
 DB 94 INPETHKPCCAPTOLNAIS 113  
 RESULT 53  
 AAW95449  
 ID AAW95449 standard; protein; 139 AA.  
 XX AAW95449;  
 AC 26-MAR-1999 (first entry)  
 DT 26-MAR-1999 (first entry)  
 XX Mature human osteogenic protein 1 (OP1) (residues 293-431).  
 DE Mature human osteogenic protein 1 (OP1) (residues 293-431).  
 XX Cystic kidney disease; renal; therapeutic; osteogenic protein; OP;  
 KM bone morphogenetic protein; BMP; growth factor-beta superfamily;  
 KM polycystic kidney disease; multicystic dysplastic kidney disease;  
 KM uremic medullary cystic disease; human.  
 XX Homo sapiens.  
 OS Homo sapiens.  
 XX WO9850061-A1.  
 EN 12-NOV-1998.  
 PD 06-MAY-1998; 98WO-US009268.  
 XX 07-MAY-1997; 97US-0045909P.  
 PR (BIOJ) BIOGEN INC.  
 PA Gjorstrup P, Harris R;  
 PI WPI; 1999-070084/06.  
 DR Treating cystic kidney disease - using renal therapeutic agents or  
 XX sequences encoding them, especially from the osteogenic protein/bone  
 PT morphogenic protein family.  
 XX Claim 4; Page; 67pp; English.  
 XX The invention relates to methods for treating cystic kidney diseases. The  
 CC method comprises administering an effective amount of a renal therapeutic  
 CC agent or a polynucleotide encoding the therapeutic agent. The therapeutic

CC agent is preferably a soluble or membrane bound polypeptide, e.g. a  
 CC member of the osteogenic protein/bone morphogenetic protein (OP/BMP) family  
 CC within a transforming growth factor-beta superfamily of proteins. It is  
 CC especially one of the polypeptides hOP1, hOP1-PP, OP1-16Ser, OP7,  
 CC OP1-16Ser, OP1-16Ser, OP1-16Ser, OP1-16Ser, OP1-16Ser, OP1-16Ser, OP1-16Ser,  
 CC hOP2, hOP2-PP, hOP2-PP, hOP2-PP, hOP2-PP, hOP2-PP, hOP2-PP, hOP2-PP,  
 CC biologically active homologues. The method is used to treat humans  
 CC having, or at risk of, cystic kidney disease, e.g. autosomal recessive  
 CC (infantile) polycystic disease, multicystic dysplastic kidney disease,  
 CC uremic medullary cystic disease, and autosomal dominant polycystic  
 CC kidney disease. The present sequence represents a mature human osteogenic  
 CC protein 1 (OP1) that can be used as a therapeutic agent in the method of  
 CC the invention. Note: This sequence is not provided in the specification.  
 CC It has been derived from the human OP1 sequence (AAW95449) obtained from  
 CC U.S. Patent No. 5,266,683  
 XX Sequence 139 AA;  
 SQ  
 Query Match 100.0%; Score 111; DB 2; Length 139;  
 Best Local Similarity 100.0%; Pred. No. 6.1e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTOLNAIS 20  
 DB 94 INPETHKPCCAPTOLNAIS 113  
 RESULT 54  
 AAY70755  
 ID AAY70755 standard; protein; 139 AA.  
 XX AAY70755;  
 AC 24-JUL-2000 (first entry)  
 DT 24-JUL-2000 (first entry)  
 XX Mature modified human BMP-7 protein.  
 DE Mature modified human BMP-7 protein.  
 XX Bone morphogenetic protein; BMP-7; human; MP52; TGF-beta superfamily;  
 KM transforming growth factor-beta; antagonist; cytoskeletal; osteopathic;  
 KM prevention; ossification; metabolic bone disease; calcification; bone;  
 KM therapy; tumour; cartilage; osteogenic; Paget's disease; screening;  
 KM myositis ossificans; arterial sclerosis.  
 XX Homo sapiens.  
 OS Homo sapiens.  
 XX Key Location/Qualifiers  
 FH Binding-site 40..58  
 FT /label= "Receptor binding site"  
 FT /note= "Composed of two vicinal peptide regions"  
 FT Misc-difference 50  
 FT /note= "Met of mature human MP52 protein at position 30  
 FT is replaced with Leu"  
 FT Modified-site 52  
 FT /note= "Allylsulphenylated Trp"  
 FT Modified-site 55  
 FT /note= "Allylsulphenylated Trp"  
 FT Binding-site 80..97  
 FT /label= "Receptor binding site"  
 FT /note= "Composed of two vicinal peptide regions"  
 FT Misc-difference 91  
 FT /note= "Met of mature human MP52 protein at position 71  
 FT is replaced with Val"  
 FT Misc-difference 94  
 FT /note= "Met of mature human MP52 protein at position 74  
 FT is replaced with Ile"  
 XX WO200021998-A1.  
 EN 20-APR-2000.  
 PD 04-OCT-1999; 99WO-IB001621.  
 XX 09-OCT-1998; 98JP-00288103.

XX (HMRI ) HOECHST MARION ROUSSEL.  
PA Katsura M, Kimura M;  
XX WPI; 2000-317945/27.  
XX Bone morphogenetic protein antagonist useful for prevention and treatment  
PT of ectopic ossification and metabolic diseases with calcification, is  
PT obtained by chemical modification or genetic engineering.  
XX Claim 9; Page 35; 40pp; English.  
XX  
XX The present sequence is the modified mature human BMP-7 protein. It  
CC belongs to the bone morphogenetic protein (BMP) family. Modification or  
CC replacement of Met at locations 30, 71, 74 and Trp at positions 32, 35 of  
CC the mature BMP2 protein to a hydrophilic or polar amino acid residue by  
CC chemical modification, yields a mature protein having an antagonistic  
CC activity against BMP. The modified sequence functions as an antagonist of  
CC bone morphogenetic activity, that has cytostatic and osteopathic  
CC ossification. This antagonist is useful for prevention and therapy of ectopic  
CC ossification or metabolic diseases with calcification. It is used for  
CC treatment of tumors in the bone and cartilage and metabolic bone  
CC diseases such as Paget's disease. It is effective in suppressing symptoms  
CC of ossification of posterior longitudinal ligament, ectopic ossification  
CC caused by stress of operation, traumatic myositis ossificans, and arterial  
CC ossification by defect of oxygen supply, osteogenic tumour and arterial  
CC sclerosis. It can be used as a reagent for screening agents which compete  
CC with BMP and for receptor binding  
SQ Sequence 139 AA;  
Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 6.1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHPKCCAPQTQMAIS 20  
DB 94 INPETHPKCCAPQTQMAIS 113  
RESULT 55  
AAAY92594  
ID AAY92594 standard; protein, 139 AA.  
XX  
XX AAY92594;  
AC  
XX 10-AUG-2000 (first entry)  
DT  
XX Mature mutant OP-1 construct H2223.  
DE  
XX finger 2 subdomain; BMP; TGF-beta family; protein refolding; OP-1;  
KW fusion protein; osteopathic; antibacterial; cytostatic; mutant.  
XX  
XX Homo sapiens.  
OS  
XX WO200020449-A2.  
PN  
XX 13-APR-2000.  
PD  
XX 07-OCT-1999; 99WO-US023372.  
PF  
XX 07-OCT-1998; 98US-0103418P.  
PR  
XX 16-AUG-1999; 99US-00375333.  
XX  
XX (STYC ) STRYKER CORP.  
PA  
XX Opermann H, Tai M, McCartney J;  
PI  
XX WPI; 2000-303743/26.  
DR  
XX A biologically active TGF-beta family member fusion protein competent to  
PT refold, comprising a C-terminal linked TGF-beta family protein.

XX  
PS Disclosure; Page 153; 160pp; English.  
XX  
XX This is a mutant OP-1 construct, designated H2223, comprising mutations  
CC in the finger 2 subdomain. Novel proteins comprise biologically active  
CC TGF-beta family member fusion proteins competent to refold under suitable  
CC refolding conditions. The fusion proteins comprise: (1) a TGF-beta family  
CC protein C-terminal seven cysteine domain, comprising finger 1, finger 2  
CC and heel subdomains; and (2) a heterologous leader sequence domain  
CC operatively linked to the C-terminal domain. Truncations, heterodimers  
CC and mutants of these fusion proteins and methods of purifying the  
CC heterodimers are also claimed. The TGF-beta family proteins can be used  
CC to induce the full cascade of morphogenic events which culminate in  
CC skeletal tissue formation, including cartilage and endochondral bone  
CC formation. They are useful in the binding of fibrin and fibronectin to  
CC the implanted matrix, chemotaxis of cells, proliferation of fibroblasts,  
CC differentiation into chondroblasts, cartilage formation, vascular  
CC invasion, bone formation, remodeling, and bone marrow differentiation.  
CC The proteins have improved physical properties such as solubility and  
CC stability, improved biological activity, including altered receptor  
CC binding and improved targeting capabilities  
SQ Sequence 139 AA;  
Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 6.1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHPKCCAPQTQMAIS 20  
DB 94 INPETHPKCCAPQTQMAIS 113  
RESULT 56  
AAB09547  
ID AAB09547 standard; protein, 139 AA.  
XX  
XX AAB09547;  
AC  
XX 11-SEP-2000 (first entry)  
DT  
XX Mature OP-1 mutant protein H2223, SEQ ID NO:68.  
DE  
XX Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
KW transforming growth factor-beta; developmental regulation;  
KW finger 2 subdomain; basic region; protein refolding; stability;  
KW solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
KW connective tissue; cartilage; vulnery; mutant; mutein.  
XX  
XX Homo sapiens.  
OS  
XX Synthetic.  
OS  
XX WO200020607-A2.  
PN  
XX 13-APR-2000.  
PD  
XX 07-OCT-1999; 99WO-US023371.  
PF  
XX 07-OCT-1998; 98US-0103418P.  
PR  
XX 16-AUG-1999; 99US-00374958.  
XX  
XX (STYC ) STRYKER CORP.  
PA  
XX Opermann H, Tai M, McCartney J;  
PI  
XX WPI; 2000-303787/26.  
DR  
XX Transforming growth factor-beta superfamily member mutant induces tissue  
PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
PT tissue and connective tissue and comprises a substitution in a region of  
PT the finger 2 domain.  
XX  
PS Claim 51; Page 155; 162pp; English.

XX The invention relates to mutant TGF-beta (transforming growth factor-beta) superfamily members. These mutants comprise one or more amino acid substitutions in the base region of the finger 2 subdomain, and a C-terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g., Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-beta superfamily proteins regulate developmental processes and include proteins such as the osteogenic proteins (OPs), bone morphogenetic proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors. Specific examples of TGF-beta superfamily mutants encompassed by the invention are the finger 2 subdomain mutants of human osteogenic protein-1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for inducing tissue morphogenesis in bone, non-mineralised skeletal tissue, dental tissue, connective tissue, brain, liver and nerve tissue. The proteins can be used in conjunction with a biocompatible matrix e.g., collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone, cartilage and/or other mineralised skeletal or connective tissues e.g., ligament, tendon, muscle, fibrocartilage, joint capsule and intervertebral discs. The OP-1 mutants can be used to repair diseased or damaged mammalian tissue and to prevent or substantially inhibit immune/inflammatory response-mediated tissue damage and scar tissue formation following an injury. Compared to the wild-type TGF-beta superfamily members, the mutant proteins have improved in vitro refolding properties in a pH range of 6-9, increased solubility in aqueous solution and improved stability and/or activity. Sequences AAB09547-B09548 and AAB09576-B09615 represent mutant or chimeric forms of human osteogenic protein-1 (OP-1).

XX  
SQ Sequence 139 AA;

Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 6.1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQLNIAIS 20  
| | | | | | | | | | | | | | | | | | | | | |  
DB 94 INPETYKPCCAPTQLNIAIS 113

## RESULT 57

AA57218  
ID AA57218 standard; protein; 139 AA.

XX  
AC AA57218;

DT 06-MAR-2000 (first entry)

XX Human osteogenic protein (hOP-1) mature protein sequence.

XX Morphogen; bone formation; modulation; endochondral; OP-1; OP-2; DPP;  
XX transforming growth factor; TGF-beta; osteogenic protein; BMP2; Vgr-1;  
XX GDF-1; 60k protein; screening assay; modulate; therapeutic; cell death.

OS Homo sapiens.

XX  
FN US94131-A.

PD 30-NOV-1999.

PF 15-AUG-1997; 97US-00912088.

PR 11-MAR-1991; 91US-00667274.

PR 30-AUG-1991; 91US-00752764.

PR 30-AUG-1991; 91US-00752861.

PR 28-AUG-1992; 92US-00938021.

PR 20-JUL-1994; 94US-00278729.

PR 26-MAY-1995; 95US-00451953.

PA (CREA-) CREATIVE BIOMOLECULES INC.

XX Smart JE, Oppermann H, Kuberasampath T, Rueger DC, Pang RH;

PI Cohen CM, Ozkaynak E;

DR WPI; 2000-038265/03.

XX Screening assay useful for identifying compounds which can act to  
PT modulate expression of a morphogen in a mammalian cell.

XX Claim 1; Col 35-36; 48pp; English.

XX The invention provides a method for altering expression of a morphogen in a mammalian cell with a compound that modulates morphogen expression in epithelial cells identified in an assay for bone formation. The method uses a protein that induces endochondral bone formation such as OP-1, a morphogenic protein which is a member of the transforming growth factor (TGF-beta) superfamily. Other morphogens useful in the invention are osteogenic proteins (OP-1, OP-2 and CBMP2) and related proteins such as DPP, Vgr-1, GDF-1 and the 60k protein. The method is used as a screening assay for identifying compounds which modulate the level of expression of a morphogen. The method allows the determination of substances useful in therapeutic treatments to modulate (stimulate or depress) morphogen expression and/or secretion in disease treatment. Compounds can be screened for their ability to modulate the effective systems or local concentration of a morphogen. Compounds which can be screened include chemicals, biological response molecules such as lymphokines, cytokines, hormones or vitamins, plant extracts, microbial broths and extract mediums conditioned by eukaryotic cells, body fluids or tissue extracts. The assay has few steps and is easy to carry out producing results quickly. Drugs which result in cell death are easy to identify. The present sequence represents the mature form of the human OP-1.

XX  
SQ Sequence 139 AA;

Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 6.1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQLNIAIS 20  
| | | | | | | | | | | | | | | | | | | | | |  
DB 94 INPETYKPCCAPTQLNIAIS 113

## RESULT 58

AAB02813  
ID AAB02813 standard; protein; 139 AA.

XX  
AC AAB02813;

DT 22-AUG-2000 (first entry)

XX Human mature H2223 mutant amino acid sequence SEQ ID NO:68.

XX Tumour growth factor beta; TGF-beta; morphogenic protein; BMP; OP;  
XX bone morphogenic protein; osteogenic protein; mutant; modified;  
XX finger 2 sub-domain; finger 1 domain; heel domain; chimeric protein;  
XX osteogenic; proliferative; antiinflammatory; tissue morphogenesis;  
XX tissue repair; regeneration; proliferation; differentiation.

OS Homo sapiens.

XX Synthetic.

PN WO200020591-A2.

PD 13-APR-2000.

PF 07-OCT-1999; 99WO-US023370.

PR 07-OCT-1998; 98US-0103418P.

PR 16-AUG-1999; 99US-00374936.

XX (STYC) STRYKER CORP.

PA Oppermann H, Tai M, McCartney J;

XX Smart JE, Oppermann H, Kuberasampath T, Rueger DC, Pang RH;

DR WPI; 2000-303776/26.

XX Novel TGF-beta superfamily mutant chimeric protein, useful for inducing

PT tissue morphogenesis in e.g. bone, comprises a dimer consisting of one

PT monomer containing domains from two family members.

PS Disclosure; Page 142; 149pp; English.

XX

CC The present invention describes a tumour growth factor beta (TGF-beta)

CC superfamily chimeric protein (I) derived from at least 2 different

CC members of the superfamily comprising a dimer with one monomer that

CC contains a finger 2 domain derived from a first family member and a

CC finger 1 domain and heel domain, both derived from a second family

CC member. The monomer further comprises a conserved C-terminal cysteine

CC skeleton. (I) has osteogenic, proliferative and antiinflammatory

CC activities. The TGF-beta superfamily chimeric proteins (I) are useful for

CC inducing tissue morphogenesis (i.e. molecules capable of tissue repair

CC and regeneration and/or inhibiting inflammation) in bone, non-mineralised

CC skeletal tissue, dental tissue, connective tissue, brain, liver and nerve

CC and for inducing the proliferation and differentiation of uncommitted

CC progenitor cells in a tissue-specific manner to support new tissue

CC formation. AAA29887 to AAA29897 and AAB02748 to AAB02824 represent

CC sequences used in the exemplification of the present invention

CC

XX

SC Sequence 139 AA;

Query Match 100.0%; Score 111; DB 3; Length 139;

Best Local Similarity 100.0%; Pred. No. 6.1e-07;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNAIS 20

DB 94 INPETHKPCCAPTOLNAIS 113

RESULT 59

AA051924

ID AA051924 standard; protein; 139 AA.

XX

AC AA051924;

XX

DT 01-FEB-2002 (first entry)

XX

DE Human TGFbeta protein superfamily protein BMP7.

XX

KM Human; TGFbeta; transforming growth factor beta, mutant; antagonist;

KM agonist; ectopic bone formation; psoriasis; muscular atrophy; scar;

KM formation; fibrosis; cirrhosis; osteopathic; antipsoriatic; antifibrotic;

KM hepatotropic; vulnary; BMP7.

XX

OS Homo sapiens.

XX

PN DE10026713-A1.

XX

PD 06-DEC-2001.

XX

PF 30-MAY-2000; 2000DE-01026713.

XX

PR 30-MAY-2000; 2000DE-01026713.

XX

PA (SEBA/) SEBALD W.

XX

PI Sebald W, Nickel J;

XX

DR WPI; 2002-042559/06.

XX

PT New mutant of transforming growth factor-beta superfamily protein, useful

PT for treating or preventing e.g. ectopic bone formation, competes for

PT receptor binding.

XX

PS Example 1; Fig 1; 54pp; German.

XX The present invention relates to mutants of a chain of a protein which,

CC when in the form of a homodimer, has antagonistic or partial agonistic

CC activity, and where the mutation results in the protein binding with low

CC affinity to its receptor. The protein is a member of the transforming

CC growth factor beta (TGFbeta) superfamily. The mutant sequences of the

CC invention can be used in the treatment of diseases associated with the

CC overexpression of TGFbeta family proteins, including ectopic bone

CC formation, psoriasis, muscular atrophy, scar formation, fibrosis and

CC cirrhosis. The present sequence is the human BMP7 protein

XX

SC Sequence 139 AA;

Query Match 100.0%; Score 111; DB 5; Length 139;

Best Local Similarity 100.0%; Pred. No. 6.1e-07;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNAIS 20

DB 94 INPETHKPCCAPTOLNAIS 113

RESULT 60

AD004098

ID AD004098 standard; protein; 139 AA.

XX

AC AD004098;

XX

DT 20-MAY-2004 (first entry)

XX

DE Human protein of the invention SEQ ID NO:2783.

XX

KM human; gene therapy; diagnostic marker; pharmaceutical.

XX

OS Homo sapiens.

XX

PN EP1347046-A1.

XX

PD 24-SEP-2003.

XX

PF 12-APR-2002; 2002EP-00008400.

XX

PR 22-MAR-2002; 2002JP-00137785.

XX

PA (REAS-) RES ASSOC BIOTECHNOLOGY.

XX

PI Isogai T, Sugiyama T, Otsuki T, Wakamatsu A, Sato H, Ishii S;

PI Yamamoto J, Isono Y, Hio Y, Otsuka K, Nagai K, Irie R, Tamechika I;

PI Seki N, Yoshikawa T, Otsuka M, Nagahari K, Masuno Y;

XX

DR WPI; 2003-723558/69.

XX

DR N-PSDB; AD001655.

XX

PT New polynucleotides and polypeptides are useful in gene therapy, for

PT developing a diagnostic marker or medicines for regulating their

PT expression and activity, or as a target of gene therapy.

XX

PS Claim 1; SEQ ID NO 2783; 305pp; English.

XX

CC The invention relates to a novel human polynucleotide and the encoded

CC polypeptide. A polynucleotide of the invention may have a use in gene

CC therapy. An oligonucleotide of the invention AD006202-AD006773 is useful

CC as a primer for synthesizing the polynucleotide or as a probe for

CC detecting the polynucleotide. The polynucleotides AD001316-AD003758 are

CC useful in gene therapy, for developing a diagnostic marker or medicines

CC for regulating their expression and activity, or as a target of gene

CC therapy. The proteins AD003759-AD006201 encoded by the polynucleotides

CC are useful as pharmaceutical agents. The present sequence represents a

CC protein sequence of the invention.

XX

SC Sequence 139 AA;

Query Match 100.0%; Score 111; DB 7; Length 139;

Best Local Similarity 100.0%; Pred. No. 6.1e-07;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNALS 20  
 DB 94 INPETHKPCCAPTOLNALS 113

RESULT 61  
 ADH11607  
 ID ADH11607 standard; protein: 139 AA.  
 AC ADH11607;  
 XX  
 DT 11-MAR-2004 (first entry)  
 XX  
 DE Human bone morphogenic protein (BMP) polypeptide #35.  
 XX  
 KW Human; bone morphogenic protein; BMP; weight gain; appetite suppression;  
 KW fat mass reduction; cell sensitivity; glucose uptake; diabetes;  
 KW insulin resistance; hyperglycaemia; hypertension;  
 KW coronary artery disease; renal failure; neuropathy; metabolic disorder;  
 KW glucose metabolism disorder; endocrine disorder; obesity; weight loss;  
 KW liver disorder; cartilage growth disorder; bone growth disorder;  
 KW inflammation; aberrant cell growth; liver cancer.  
 XX  
 OS Homo sapiens.  
 XX  
 PN US2003224501-A1.  
 XX  
 PD 04-DEC-2003.  
 XX  
 PF 14-FEB-2003; 2003US-00365345.  
 XX  
 PR 17-MAR-2000; 2000US-0190067P.  
 PR 16-MAR-2001; 2001US-00809269.  
 PR 23-MAR-2001; 2001WO-US009229.  
 PR 17-JAN-2002; 2002US-0348621P.  
 PR 22-JAN-2002; 2002US-0349356P.  
 PR 28-JAN-2002; 2002US-0351520P.  
 PR 06-FEB-2002; 2002US-0354265P.  
 PR 15-FEB-2002; 2002US-0356749P.  
 PR 16-JAN-2003; 2003US-00345236.  
 XX  
 PA (YOUNG/) YOUNG P E.  
 PA (RUBE/) RUBEN S M.  
 XX  
 PI Young PE, Ruben SM;  
 XX  
 DR WPI; 2004-022075/02.  
 XX  
 PT New bone morphogenic protein polypeptides and polymucleotides, useful for  
 PT diagnosing, preventing, treating or ameliorating a medical condition,  
 PT e.g. diabetes, dyslipidemia, hypertension, coronary artery disease or  
 PT neuropathy.  
 XX  
 PS Claim 1; SEQ ID NO 63; 224pp; English.  
 XX

The invention relates to human bone morphogenic protein (BMP) polypeptides and the polymucleotides encoding them. The invention also relates to a method for limiting weight gain, suppressing appetite or reducing fat mass, comprising administering to a mammalian subject a therapeutic amount of a BMP polypeptide, and a method for increasing the sensitivity of a cell to insulin or increasing glucose uptake by a cell, comprising contacting the cell with a BMP polypeptide. The BMP polypeptides and polymucleotides are useful for diagnosing a pathological condition or a susceptibility to a pathological condition in a subject or for preventing, treating or ameliorating a medical condition, e.g. diabetes, insulin resistance, hyperglycaemia, hypertension, coronary artery disease, renal failure, neuropathy, metabolic disorders, glucose metabolism disorder, endocrine disorders, obesity, weight loss, liver disorders, cartilage and bone growth disorders, inflammation or aberrant cell growth such as liver cancer. The BMP polypeptides and polymucleotides are also useful for regulating nutritional partitioning, limiting weight gain, suppressing appetite, reducing fat mass, increasing

CC the sensitivity of a cell to insulin or increasing glucose uptake by a  
 CC cell. This sequence represents a human BMP polypeptide of the invention.  
 CC  
 XX Sequence 139 AA;  
 XX

Query Match 100.0%; Score 11; DB 8; Length 139;  
 Best Local Similarity 100.0%; Pred. No. 6.1e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNALS 20  
 DB 94 INPETHKPCCAPTOLNALS 113

RESULT 62  
 ADK90626  
 ID ADK90626 standard; protein: 139 AA.  
 XX  
 AC ADK90626;  
 XX  
 DT 03-JUN-2004 (first entry)  
 XX  
 DE Human osteogenic protein 1 morphogen Seqid 1.  
 XX  
 KW human; chronic renal failure; renal disorder; osteogenic protein; OP;  
 KW bone morphogenic protein; BMP; morphogen;  
 KW angiotensin-converting enzyme inhibitor; ACE;  
 KW angiotensin II receptor antagonist; AlIRA; end-stage renal disease; ESRD;  
 KW chronic diabetic nephropathy; diabetic glomerulopathy;  
 KW diabetic renal hypertrophy; hypertensive nephrosclerosis;  
 KW hypertensive glomerulosclerosis; chronic glomerulonephritis;  
 KW hereditary nephritis; renal dysplasia; antidiabetic; nephrotropic;  
 KW antiinflammatory; vasotrophic.  
 XX  
 OS Homo sapiens.  
 XX  
 PN WO2004019876-A2.  
 XX  
 PD 11-MAR-2004.  
 XX  
 PF 28-AUG-2003; 2003WO-US026923.  
 XX  
 PR 28-AUG-2002; 2002US-0406431P.  
 XX  
 PA (CURT-) CURTIS INC.  
 PA (UNITW) UNITW WASHINGTON.  
 XX  
 PI Charette MF, Hruska KA, McCartney J;  
 XX  
 DR WPI; 2004-282635/26.  
 XX  
 PT Treating or preventing chronic renal failure in mammal, comprises  
 PT conjointly administering osteogenic proteins/bone morphogenic proteins  
 PT morphogen and angiotensin-converting enzyme inhibitor to mammal.  
 XX  
 PS Disclosure; SEQ ID NO 1; 365pp; English.  
 XX

This invention relates to a novel method for treating or preventing chronic renal failure and other associated mammalian renal disorders. Specifically, it refers to conjointly administering osteogenic protein (OP) or bone morphogenic protein (BMP) morphogens with an angiotensin-converting enzyme (ACE) inhibitor, in particular the angiotensin II receptor antagonist/ blocker (AlIRA). The present invention describes using these compositions as inducers of proliferation and differentiation of renal tissue, and as such can be used to prevent, inhibit, delay or alleviate the progressive loss of renal function and the decline in glomerular filtration rate (GFR) characterised by chronic renal failure. Furthermore, they can be useful for treating conditions such as end-stage renal disease (ESRD), chronic diabetic nephropathy, diabetic glomerulopathy, diabetic renal hypertrophy, hypertensive nephrosclerosis, hypertensive glomerulosclerosis, chronic glomerulonephritis, hereditary nephritis and renal dysplasia where the mammal is a kidney transplant recipient. Accordingly, compositions exhibit antidiabetic, nephrotropic,

CC antiinflammatory and vasotropic activities. This polypeptide sequence is  
 CC a human osteogenic protein 1 of the invention.  
 XX Sequence 139 AA;  
 SQ

Query Match 100.0%; Score 111; DB 8; Length 139;  
 Best Local Similarity 100.0%; Pred. No. 6.1e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNAIS 20  
 |||  
 DB 94 INPETHKPCCAPTOLNAIS 113

RESULT 63  
 ADK72628  
 ID ADK72628 standard; protein; 141 AA.  
 XX  
 AC ADK72628;  
 XX  
 DT 06-MAY-2004 (first entry)  
 XX  
 DE rh BMP-7 mature peptide.  
 XX  
 KW human bone morphogenetic protein-7 mature peptide dimer;  
 KW rh BMP-7 mature peptide.  
 XX  
 CS Homo sapiens.  
 XX  
 PN CN1412200-A.  
 XX  
 PD 23-APR-2003.  
 XX  
 PF 12-OCT-2001; 2001CN-00135658.  
 XX  
 PR 12-OCT-2001; 2001CN-00135658.  
 XX  
 PA (GENE-) INST GENE TECHNOLOGY HANGZHOU HUADONG ME.  
 XX  
 PI Xu F, Zheng Z;  
 XX  
 DR WPI; 2004-000155/01.  
 DR N-PSDB; ADK72627.  
 XX  
 PT Method for preparing recombinant human bone morphogenetic protein-7  
 PT mature peptide dimer.  
 XX  
 PS Claim 1; SEQ ID NO 2; 11pp; Chinese.  
 XX  
 CC The present invention relates to preparing recombinant human bone  
 CC morphogenetic protein-7 mature peptide dimer. The present sequence  
 CC represents rh BMP-7 mature peptide.  
 XX  
 SQ Sequence 141 AA;  
 Query Match 100.0%; Score 111; DB 8; Length 141;  
 Best Local Similarity 100.0%; Pred. No. 6.2e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNAIS 20  
 |||  
 DB 95 INPETHKPCCAPTOLNAIS 114

RESULT 64  
 AAW29295  
 ID AAW29295 standard; protein; 161 AA.  
 XX  
 AC AAW29295;  
 XX  
 DT 20-APR-1998 (first entry)  
 XX  
 DE Human osteogenic protein subunit D linked to pel B protein product.

XX Bactericidal/permeability increasing peptide; BPI; fusion protein;  
 KW bacterial infection; fungal infection; endotoxin; heparin; angiogenesis;  
 KW fungicidal; recombinant DNA; vector.  
 XX  
 OS Synthetic.  
 OS Pectobacterium carotovorum.  
 OS Homo sapiens.  
 OS Chimeric.  
 XX  
 PN WO9735009-A1.  
 XX  
 PD 25-SEP-1997.  
 XX  
 PF 18-MAR-1997; 97WO-US005287.  
 XX  
 PR 22-MAR-1996; 96US-00621803.  
 XX  
 PA (XOMA ) XOMA CORP.  
 XX  
 PI Better MD;  
 XX  
 DR WPI; 1997-480215/44.  
 DR N-PSDB; AAT86333.  
 XX  
 PT Recombinant production of bactericidal/permeability increasing protein -  
 PT by expression as a fusion protein in microbial host cells, then cleaving  
 PT the BPI peptide from the carrier.  
 XX  
 PS Example 1; Page 146-147; 186pp; English.  
 XX  
 CC A new recombinant DNA vector construct has been developed which encodes a  
 CC fusion protein and is suitable for introduction into a bacterial host.  
 CC The vector comprises: (a) DNA encoding at least one cationic  
 CC bactericidal/permeability increasing peptide (BPI), (b) DNA encoding a  
 CC carrier protein, and (c) DNA encoding an amino acid (aa) cleavage site  
 CC located between (a) and (b). The present sequence represents a human  
 CC osteogenic protein subunit D linked to pel B protein product, used in an  
 CC example in the present invention. The peptides have many uses including  
 CC the treatment of bacterial and fungal infections. BPI peptides also bind  
 CC to endotoxins and heparin, neutralising their effects. The peptides have  
 CC further been shown to inhibit angiogenesis (partly due to heparin-binding  
 CC activity). The fusion proteins have been found to be expressed in large  
 CC amounts without significant proteolysis, and in some cases are actually  
 CC secreted from the host cells. This allows the indirect production of anti-  
 CC microbial BPI peptides in microbial hosts  
 XX  
 SQ Sequence 161 AA;  
 Query Match 100.0%; Score 111; DB 2; Length 161;  
 Best Local Similarity 100.0%; Pred. No. 7.1e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNAIS 20  
 |||  
 DB 116 INPETHKPCCAPTOLNAIS 135

RESULT 65  
 AAB18757  
 ID AAB18757 standard; protein; 161 AA.  
 XX  
 AC AAB18757;  
 XX  
 DT 22-JAN-2001 (first entry)  
 XX  
 DE Subunit D of human osteogenic protein linked to a pelB leader sequence.  
 XX  
 KW Fusion protein expression; bactericidal permeability-increasing protein;  
 KW BPI; antimicrobial; endotoxin binding agent; neutralizing agent;  
 KW subunit D; osteogenic protein.  
 XX  
 OS Synthetic.

```

OS Pectobacterium carotovorum.
XX Homo sapiens.
XX
XX Key Location/Qualifiers
FH Peptide 1. .22
FT /note= "pe1B leader sequence from the pectate lyase gene
FT of Erwinia carotovora"
FT 23. .161
FT Protein /note= "subunit D of human osteogenic protein"
XX
XX MO200055322-A1.
XX
XX 21-SEP-2000 .
XX
XX 17-MAR-2000; 2000MO-US007148.
XX
XX 18-MAR-1999; 99US-00271970.
XX
XX (XOMA ) XOMA TECHNOLOGY LTD.
XX
XX Better MD, Gavit PD;
XX
XX WPI; 2000-602118/57.
XX
XX N-PSDB; AAA75797.
XX
XX Improved production of recombinant peptides from bacterial cells involves
XX treating bacterial cells with acid to disrupt or lyse the cells and
XX release the peptide from fusion protein.
XX
XX Example 1; Page 38-39; 53pp; English.
XX
XX The specification describes an improved method for obtaining a peptide
XX from bacterial cells after fusion protein expression in the cells. The
XX method comprises treating the bacterial cells with acid to disrupt or
XX lyse the cells and release the peptide from fusion protein, in a single
XX step. The fusion protein comprises the peptide, and a carrier protein,
XX with an acid-cleavable site between them. The method is useful for
XX obtaining recombinant peptides such as bactericidal permeability-
XX increasing protein (BPI)-derived peptides from bacterial cells. BPI-
XX derived peptides having the activity of BPI are useful as antimicrobial
XX agents, as endotoxin binding and neutralizing agents. The present
XX sequence represents subunit D of a human osteogenic protein. It is linked
XX to a peptide derived from BPI, and the construct used to produce vectors
XX for use in the method of the invention
XX
XX Sequence 161 AA;
XX
XX Query Match: 100.0%; Score 111; D3 3; Length 161;
XX Best Local Similarity 100.0%; Pred. No. 7.1e-07;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX 1 INPETHPKCCAPTOLNAIS 20
XX ||||||||||||||||
XX 116 INPETHPKCCAPTOLNAIS 135
XX
XX RESULT 66
XX ID AAR44749
XX AC AAR44749;
XX
XX 25-MAR-2003 (revised)
XX DT 01-JUL-2002 (revised)
XX DT 06-JUN-1994 (first entry)
XX
XX Osteogenic fusion protein OPIA.
XX
XX Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;
XX vascularisation; mineralisation; differentiation; ss.
XX
XX Homo sapiens.
XX

```

FT	Key	Location/Qualifiers
FT	Region	1..60
FT		/label= Leader sequence.
FT	Region	63..169
FT		/note= "Substantial fragment of the OPl mature protein."
XX	PV	US5266683-A.
XX	PD	30-NOV-1993.
XX	PF	21-FEB-1992;
XX	PR	92US-00841646.
XX	PR	08-APR-1988;
XX	PR	15-AUG-1988;
XX	PR	23-FEB-1989;
XX	PR	17-OCT-1989;
XX	PR	22-FEB-1990;
XX	PR	20-AUG-1990;
XX	PR	07-SEP-1990;
XX	PR	18-OCT-1990;
XX	PR	18-OCT-1990;
XX	PR	21-NOV-1990;
XX	PR	04-DEC-1990;
XX	PR	04-DEC-1990;
XX	PR	22-FEB-1991;
XX	PR	20-DEC-1991;
XX	PR	28-JAN-1992;
XX	PA	(STYC ) STRYKER CORP.
XX	PI	Kuberasampath T, Ozkaynak E, Rueger DC, Pang RHL, Oppermann H;
XX	DR	WPI; 1993-395405/49.
XX	DR	N-PDB; AAQ53145.
PT	PT	New pure mammalian osteogenic proteins - induce cartilage and endochondral bone formation when in association with a matrix.
XX	PS	Disclosure; Col 99-100; 128pp; English.
XX	CC	The fusion protein comprises substantially all of the mature form of OPl (AAR44746, residues 328-431) linked by an Asp-Pro cleavage site to a leader sequence suitable for promoting expression in E. coli. The protein when in association with a matrix can induce at the locus of an implant the full development cascade of endochondral bone formation including vascularisation, mineralisation and bone marrow differentiation. The osteogenic protein can also be used to repair both bone and cartilage in the treatment of osteoarthritis. (Updated on 01-JUL-2002 to add missing PA field.) (Updated on 25-MAR-2003 to correct PF field.) (Updated on 25-MAR-2003 to correct PR field.)
SQ	Sequence	169 AA;
Query Match	Similarity	100.0%; Score 111; DB 2; Length 169;
Best Local	Similarity	100.0%; Pident. No. 7,4e-07;
Matches	20; Conservative	0; Mismatches 0; Indels 0; Gaps 0;
Oy	1	INPETVPKPCCAPTQLNAIS 20 
Db	124	INPETVPKPCCAPTQLNAIS 143
RESULT 67	AAR85765	
ID	AAR85765	standard; protein; 169 AA.
XX	AAR85765;	
DT	25-MAR-2003	(revised)
DT	20-JUN-1996	(first entry)
DE	OPlA fusion protein encoded by OPl(a) cDNA.	

XX	Human, osteogenic protein, hOP-1; murine, mOP-1; TGF-beta superfamily;
KW	transforming growth factor-beta; dimer; antibody; epiloque; hippocampus;
KW	purification, "implanted osteogenic device"; bone formation; craniofacial
KW	anomaly; skeletal; dental; endochondral bone formation; MLE leader;
KW	non-union fracture; cartilage repair; osteoarthritis.
OS	Homo sapiens.
OS	Escherichia coli.
XX	
FT	Key
FT	Peptide
FT	1..60
FT	/note="MLE leader peptide"
FT	61..62
FT	Cleavage-site
FT	/note="Asp-Pro acid cleavage site"
FT	Misc-difference 63
FT	Protein
FT	64..169
FT	/note="Probably included due to a cloning anomaly"
XX	
XX	US5468845-A.
XX	
PD	21-NOV-1995.
XX	
EP	01-NOV-1993; 93US-00147023.
XX	
PR	08-APR-1988; 88US-00179406.
PR	15-AUG-1988; 88US-00232630.
PR	23-FEB-1989; 89US-00315342.
PR	17-OCT-1989; 89US-00422613.
PR	17-OCT-1989; 89US-00422699.
PR	22-FEB-1990; 90US-00483913.
PR	20-AUG-1990; 90US-00569920.
PR	07-SEP-1990; 90US-00579865.
PR	18-OCT-1990; 90US-00599543.
PR	18-OCT-1990; 90US-00600024.
PR	21-NOV-1990; 90US-00616374.
PR	04-DEC-1990; 90US-00621849.
PR	04-DEC-1990; 90US-00621988.
PR	22-FEB-1991; 91US-00660162.
PR	20-DEC-1991; 91US-00810560.
PR	28-JAN-1992; 92US-000827052.
PR	21-FEB-1992; 92US-000841646.
XX	
PA	(STYC ) STRYKER CORP.
XX	
P1	Rueger DC, Kuberaampath T, Oppermann H, Ozkaymak E,
XX	WPI; 1996-010159/01.
DR	N-PSDB; AAT02605.
XX	
PT	Antibodies with osteogenic protein binding specificity - used in
PT	purification of osteogenic proteins, and as antigenic proteins.
XX	
PS	Disclosure; Col 99-100; 129pp; English.
XX	
CC	The sequences given in AAR85765-70 represent fusion proteins comprising
CC	fragments of human osteogenic protein. The MLE leader sequence is
CC	suitable for promoting expression in E. coli. The genes were expressed in
CC	E. coli under the control of a synthetic T7P promoter-operator to produce
CC	synthetic inclusion bodies. Constructs containing the Asp-Pro site were
CC	cleaved with acid. The resulting products were purified, refolded and
CC	allowed to dimerise. The proteins had osteogenic activity when properly
CC	folded and dimerised. Antisera were produced against the purified
CC	proteins. The resulting antibodies had binding specificities for
CC	osteogenic proteins. The antibodies are capable of binding specifically
CC	to an epitope of the osteogenic protein and may be used in purification
CC	protocols. Osteogenic proteins, such as these, may be used in an
CC	implantable osteogenic device which allows predictable bone formation to
CC	correct acquired and congenital craniofacial and other skeletal or dental
CC	anomalies. They may be used to induce local endochondral bone formation
CC	in non-union fractures and in other clinical applications including
CC	dental and periodontal applications where bone formation is required.

	CC	Other potential applications include cartilage repair, e.g. in the treatment of osteoarthritis. (Updated on 25-MAR-2003 to correct PF field.)
	CC	(Updated on 25-MAR-2003 to correct PR field.)
	XX	Sequence 169 AA;
	Dy	Query Match                      100.0%; Score 111; DB 2; Length 169; Best Local Similarity    100.0%; Pred. No. 7,4e-07; Matches    20; Conservative    0; Mismatches    0; Indels    0; Gaps    0
	Db	1 INPEVTPKPCAPTOLNALIS 20 
		124 INPEVTPKPCAPTOLNALIS 143
	RESULT 68	
	ID	AAW44305 standard; protein; 169 AA.
	AC	AAW44305;
	DT	27-MAY-1998 (first entry)
	DE	Human osteogenic fusion protein OPLA.
	KW	Human; osteogenic fusion protein; subunit; endochondral bone formation; dimeric; recombinant protein.
	OS	Synthetic.
	CS	Homo sapiens.
	FN	US5714589-A.
	PD	03-FEB-1998.
	PF	23-MAY-1995;    9SUS-00447570.
	PR	06-APR-1988;    8BUS-00179406. 15-AUG-1988;    8BUS-00232630. 23-FEB-1989;    8BUS-00315342. 17-OCT-1989;    8BUS-00422613. 17-OCT-1989;    8BUS-00422639. 22-FEB-1990;    9OUS-00483913. 20-AUG-1990;    9OUS-00569920. 07-SEP-1990;    9OUS-00579865. 18-OCT-1990;    9OUS-00599543. 18-OCT-1990;    9OUS-00600024. 21-NOV-1990;    9OUS-00616374. 04-DEC-1990;    9OUS-00621849. 04-DEC-1990;    9OUS-00621986. 22-FEB-1991;    9IUS-00660162. 20-DEC-1991;    9IUS-00810560. 28-JAN-1992;    9ZUS-00827052. 21-FEB-1992;    9ZUS-00841646. 01-NOV-1993;    9JUS-00147023.
	PA	(STYC ) STRYKER CORP.
	PI	Parg RHL, Rueger DC, Kuberaasampath T, Oppermann H, Ozkaynak E, WPI, 1998-158353/14. N-PADB; AAV15208.
	PT	Extraction of osteogenic protein from mixture - using antibodies specific for novel polypeptide chains useful as subunit(s) of dimeric osteogenic protein(s).
	PS	Disclosure; Col 97-98, 127PP; English.
	XX	The present sequence represents a human osteogenic fusion protein, which is used in the present invention. The present invention describes methods for selectively extracting an osteogenic protein (OP) from a mixture. The method comprises: (a) exposing the mixture to an antibody that



CC specifically binds OP, separating the resulting antibody-protein complex from the mixture, and dissociating the complex. In the method OP comprises a pair of oxidized subunits that are disulphide-bonded to form a dimer, and one of the subunits has an amino acid (aa) sequence sufficiently homologous to residues 335-431 of a 431 aa protein designated OPs, sequence given in the specification. In dimeric form OP is capable of inducing cartilage and endochondral bone formation in a mammal when disposed within a matrix implanted in the mammal. The methods are used for recovering the recombinant proteins from cell cultures

SQ Sequence 169 AA;

Query Match 100.0%; Score 111; DB 2; Length 169;  
Best Local Similarity 100.0%; Pred. No. 7.4e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INBETVPRCCAPTQNLNALS 20  
124 INBETVPRCCAPTQNLNALS 143

DB

RESULT 69  
AAW89682  
ID AAW89682 standard; protein; 169 AA.  
XX  
AC AAW89682;  
XX  
DT 20-MAR-2003 (revised)  
DT 24-MAR-1999 (first entry)  
XX  
DE Osteogenic fusion protein OPIA.  
XX  
KM Human; osteogenic protein; OP-1; OPX; endochondral bone formation; cartilage; craniofacial defect; skeletal disorder; dental disorder; non-union fracture; osteoarthritis; vasculatization; mineralisation; bone marrow differentiation.  
XX  
OS Homo sapiens.  
OS Synthetic.  
XX  
PN US5863758-A.  
XX  
PD 26-JAN-1999.  
XX  
PF 23-MAY-1995; 95US-00449700.  
XX  
XX 08-APR-1988; 88US-00179406.  
XX 15-AUG-1988; 88US-00232630.  
XX 23-FEB-1989; 89US-00315342.  
XX 17-OCT-1989; 89US-00422613.  
XX 17-OCT-1989; 89US-00422699.  
XX 22-FEB-1990; 90US-00463913.  
XX 20-AUG-1990; 90US-00569920.  
XX 07-SEP-1990; 90US-00579865.  
XX 18-OCT-1990; 90US-00599543.  
XX 21-NOV-1990; 90US-00600024.  
XX 18-OCT-1990; 90US-00616374.  
XX 04-DEC-1990; 90US-00621849.  
XX 04-DEC-1990; 90US-00621888.  
XX 22-FEB-1991; 91US-00660162.  
XX 20-DEC-1991; 91US-00810560.  
XX 28-JAN-1992; 92US-00827052.  
XX 21-FEB-1992; 92US-00841646.  
XX 01-NOV-1993; 93US-00147023.  
XX  
XX (STYC ) STRYKER CORP.  
XX  
XX Pang RHL, Rueger DC, Kuberasampath T, Oppermann H, Ozkayrak E;  
XX WPI; 1999-131303/11.  
XX N-PSDB; AAX00233.  
XX  
XX Nucleic acid encoding mammalian osteogenic proteins in prepro form - able

PT to induce cartilage and bone formation when implanted in matrix; useful for repairing bone defects.  
XX  
XX  
PS Disclosure; Col 97-98; 127pp; English.  
XX  
XX The present invention describes isolated DNA (I) encoding at least one osteogenically active region of human osteogenic protein-1 in prepro form (OPI-PP), murine OPI-PP, murine OP2-PP or human OP2-PP. Also described are: (A) DNA related to (I) encoding a polypeptide able to form dimers that can induce cartilage and endochondral bone formation in a mammal when implanted in a matrix; (B) vectors containing (I) or related DNA; (C) host cells transformed with this vector; (D) DNA (I') encoding a prepro- or pro-OPI, and related vectors and transformed cells; (E) osteogenic protein (II) produced by expression of transformed mammalian cells, able to induce bone and cartilage formation; (F) mature OPI secreted from mammalian cells following expression of the sequence that encodes hOPI-PP; and (G) production of an active osteogenic composition by truncating mature OPI protein. Host cells of (C) are used to produce proteins able to induce cartilage and bone formation, e.g. for correction of acquired or congenital craniofacial defects or other skeletal or dental disorders; to heal non-union fractures; to repair cartilage, e.g. in osteoarthritis, or generally wherever bone formation is required. The CC proteins induce complete development of endochondral bone, including vasculatization, mineralisation and bone marrow differentiation. The CC present sequence represents an osteogenic fusion protein OPIA. (Updated on 20-MAR-2003 to correct PA field.)  
XX  
SQ Sequence 169 AA;

Query Match 100.0%; Score 111; DB 2; Length 169;  
Best Local Similarity 100.0%; Pred. No. 7.4e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INBETVPRCCAPTQNLNALS 20  
124 INBETVPRCCAPTQNLNALS 143

DB

RESULT 70  
AAW43116  
ID AAW43116 standard; protein; 169 AA.  
XX  
AC AAW43116;  
XX  
DT 16-DEC-1999 (first entry)  
XX  
XX  
DE Osteogenic protein OPIA fusion protein sequence.  
XX  
XX Chondrogenic protein; biodegradable matrix; cell proliferation; cell differentiation; migratory progenitor cell; cartilage formation; allogenic implant; xenogenic implant; endochondral bone formation;  
XX  
XX Synthetic.  
XX  
XX US5958441-A.  
XX  
XX 28-SEP-1999.  
XX  
XX  
XX 24-MAY-1995; 95US-00449699.  
XX  
XX 08-APR-1988; 88US-00179406.  
XX 15-AUG-1988; 88US-00232630.  
XX 23-FEB-1989; 89US-00315342.  
XX 17-OCT-1989; 89US-00422613.  
XX 17-OCT-1989; 89US-00422699.  
XX 22-FEB-1990; 90US-00463913.  
XX 20-AUG-1990; 90US-00569920.  
XX 07-SEP-1990; 90US-00579865.  
XX 18-OCT-1990; 90US-00599543.  
XX 21-NOV-1990; 90US-00600024.  
XX 04-DEC-1990; 90US-00621849.

PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 PR 22-DEC-1992; 92US-00995345.  
 PR 01-NOV-1993; 93US-00147023.  
 XX (STYC ) STRYKER BIOTECH CORP.  
 XX Rieger DC, Pang RHL, Kuberasampath T, Ozkaynak E, Oppermann H,  
 XX WPI; 1999-589530/50.  
 DR N-PSDB; AAZ27584.  
 XX  
 PT Implant for mammals permitting the influx, proliferation and  
 PT differentiation of migratory progenitor cells, useful for inducing  
 PT endochondral bone formation in mammals.  
 XX  
 PS Disclosure; Col 95-97; 127P; English.  
 XX  
 CC This sequence is an osteogenic protein 1A (OPIA) fusion protein. The  
 CC invention relates to a device for implantation in a mammal comprising a  
 CC chondrogenic protein (1) dispersed within a biocompatible, in vivo  
 CC degradable matrix defining pores which permits the influx, proliferation  
 CC and differentiation of migratory progenitor cells, where (1) comprises a  
 CC substantially pure protein with the amino acid sequence VPKPCAPT, which  
 CC is capable of inducing cartilage formation. The device is used as an  
 CC allogenic or xenogenic implant for the induction endochondral bone  
 CC formation in mammals  
 XX  
 SQ Sequence 169 AA;  
 QY  
 Db 1 INPETHKPCCAPTQNLNALS 20  
 124 INPETHKPCCAPTQNLNALS 143  
 RESULT 71  
 ADJ62684  
 ID ADJ62684 standard; protein; 169 AA.  
 XX  
 AC ADJ62684;  
 XX  
 DT 06-MAY-2004 (first entry)  
 XX  
 DE Human osteogenic protein 1A, OPIA.  
 XX  
 KW human; osteogenic protein 1; OPIA; osteogenic device;  
 KW endochondral bone formation; bone repair; cartilage repair;  
 KW vascularisation; mineralisation; bone marrow differentiation.  
 XX  
 OS Homo sapiens.  
 XX  
 FN US6551995-B1.  
 XX  
 PD 22-APR-2003.  
 XX  
 PF 04-SEP-1998; 96US-00148925.  
 XX  
 XX 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422623.  
 PR 17-OCT-1989; 89US-00422659.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569820.  
 PR 07-SEP-1990; 90US-00579865.

PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 PR 01-NOV-1993; 93US-00147023.  
 PR 24-MAY-1995; 95US-00449699.  
 XX (STYC ) STRYKER CORP.  
 XX  
 PA Oppermann H, Ozkaynak E, Kuberasampath T, Rieger DC, Pang RHL,  
 XX WPI; 2003-575998/54.  
 DR N-PSDB; ADJ62683.  
 XX  
 PT Osteogenic device useful for inducing endochondral bone formation in  
 PT mammals, comprises ceramic or biodegradable non-collagen polymer matrix  
 PT containing substantially pure natural-sourced mammalian osteogenic  
 PT protein.  
 XX  
 PS Disclosure; SEQ ID NO 9; 127P; English.  
 XX  
 CC The invention relates to an osteogenic device for implantation in a  
 CC mammal, comprising a ceramic or biodegradable non-collagen polymer matrix  
 CC defining pores of a dimension sufficient to permit influx,  
 CC differentiation and proliferation of migratory progenitor cells from the  
 CC body of mammal, and a substantially pure osteogenic protein competent to  
 CC induce endochondral bone formation when disposed in the matrix and  
 CC implanted in mammal. The device is useful for producing endochondral bone  
 CC formation in mammals, for bone and cartilage repair, for inducing the  
 CC full developmental cascade of endochondral bone formation including  
 CC vascularisation, mineralisation and bone marrow differentiation at the  
 CC locus of an implant when implanted in a mammalian body. The device is  
 CC useful for bone formation in various orthopedic, periodontal and  
 CC reconstructive procedures. The present sequence represents the amino acid  
 CC sequence of human osteogenic protein 1A, OPIA.  
 XX  
 SQ Sequence 169 AA;  
 QY  
 Db 1 INPETHKPCCAPTQNLNALS 20  
 124 INPETHKPCCAPTQNLNALS 143  
 RESULT 72  
 ADJ52755  
 ID ADJ52755 standard; protein; 169 AA.  
 XX  
 AC ADJ52755;  
 XX  
 DT 29-JAN-2004 (first entry)  
 XX  
 DE Human osteogenic protein, OPIA fusion.  
 XX  
 KW Human; osteogenic protein; OPI; CBMP2A; CBMP2B; osteogenic device;  
 KW endochondral bone formation; cartilage formation; non-union fracture;  
 KW cartilage repair; dental reconstructive procedure.  
 XX  
 OS Chimeric.  
 OS Homo sapiens.  
 OS Escherichia coli.  
 XX  
 PN US2003069401-A1.  
 XX  
 PD 10-APR-2003.

XX 24-OCT-1997; 97US-00957425.  
PF  
XX 08-APR-1988; 88US-00179406.  
PR 15-AUG-1988; 88US-00232630.  
PR 23-FEB-1989; 89US-00315342.  
PR 17-OCT-1989; 89US-00422613.  
PR 17-OCT-1989; 89US-00422699.  
PR 22-FEB-1990; 90US-00483913.  
PR 20-AUG-1990; 90US-00569920.  
PR 18-OCT-1990; 90US-00599543.  
PR 18-OCT-1990; 90US-00600024.  
PR 21-NOV-1990; 90US-00616574.  
PR 04-DEC-1990; 90US-00621849.  
PR 04-DEC-1990; 90US-00621988.  
PR 22-FEB-1991; 91US-00660162.  
PR 20-DEC-1991; 91US-00810560.  
PR 28-JAN-1992; 92US-00827052.  
PR 21-FEB-1992; 92US-00841646.  
PR 22-DEC-1992; 92US-00995345.  
PR 01-NOV-1993; 93US-00147023.  
PR 23-MAY-1995; 95US-00447570.  
XX  
XX (OPPE/) OPPERMAN H.  
PA (OZKA/) OZKAYNAK E.  
PA (RUEB/) KUBERASAMPATH T.  
PA (RUEG/) RUEGER D C.  
PA (PANG/) PANG R H L.  
XX  
XX Opermann H, Ozkaynak E, Kuberasampath T, Rueger DC, Pang RHL;  
PI WPI: 2004-008898/01.  
DR P-PSDB; ADE52754.  
XX  
XX Osteogenic device for inducing endochondral bone formation, has  
PT osteogenic protein comprising a pair of unglycosylated protein chains  
PT disulfide bonded to produce dimeric species, dispersed within  
PT biocompatible matrix.  
XX  
XX Disclosure; SEQ ID NO 9; 130pp; English.  
PS  
XX The invention relates to an osteogenic device for implantation in a  
CC mammal, comprising osteogenic protein (OP) dispersed within a  
CC biocompatible, in vivo biodegradable matrix, where OP comprises a pair  
CC (P) of unglycosylated protein chains disulfide bonded to produce dimeric  
CC species having a conformation so that (P) is capable of inducing  
CC endochondral bone formation in mammal when disposed in the matrix and  
CC accessible to the cells. Also included are substantially a pure mammalian  
CC osteogenic protein (comprising a pair of unglycosylated polypeptide  
CC chains and capable of inducing endochondral bone formation in association  
CC with a matrix when implanted in a mammal, where the osteogenic protein  
CC comprises peptides derived from human or mouse OP1), a DNA sequence  
CC encoding a protein capable of inducing endochondral bone formation in a  
CC mammal, a vector comprising the DNA, a host cell harbouring and capable  
CC of expressing (DNA or vector), an osteogenic protein as defined above  
CC as a subunit of a dimeric osteogenic protein and an antibody (Ab) capable  
CC of binding specifically to an epitope on the osteogenic proteins. The  
CC osteogenic device is useful for inducing local cartilage and bone  
CC formation, for endochondral bone formation in a mammal, for inducing  
CC cartilage or endochondral bone formation in a mammal, or for inducing  
CC endochondral bone formation in a non-union fracture in a mammal. The  
CC osteogenic device is useful for cartilage repair in a mammal, in  
CC periodontal or dental reconstructive procedures, or in endochondral bone  
CC reconstructive procedures. The antibody is useful for selectively  
CC extracting osteogenic protein from a mixture of molecules. The host cell  
CC is useful for producing a protein by recombinant gene expression. The  
CC osteogenic proteins are useful to raise monoclonal are polyclonal  
CC antibodies capable of specifically binding to an epitope of the  
CC osteogenic protein. The present sequence represents a human osteogenic  
CC protein as a fusion protein with an E. coli leader sequence for  
CC heterologous expression. Note: The claims refer to regions of mouse and  
CC human osteogenic proteins which are functional in the osteogenic device,

CC however the authors refer to a DNA SEQ ID number where they really mean  
CC to refer to a protein.  
XX  
XX SQ Sequence 169 AA;  
XX  
XX Query Match 100.0%; Score 111; DB 8; Length 169;  
Best Local Similarity 100.0%; Pred. No. 7, 4e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
XX  
XX 1 INPETVPRCCAPTQNLNALS 20  
Db 124 INPETVPRCCAPTQNLNALS 143  
XX  
XX RESULT 73  
ADM80493  
ID ADM80493 standard; protein; 169 AA.  
XX  
XX ADM80493;  
AC  
XX  
XX 03-JUN-2004 (first entry)  
DT  
XX  
XX Human osteogenic protein, OPIA.  
DE  
XX human; osteogenic device; osteogenic protein; OPIA; biocompatible matrix;  
KW endochondral bone formation; non-union fracture; cartilage formation;  
KW periodontal reconstructive procedure; dental reconstructive procedure;  
KW cartilage repair.  
XX  
XX Homo sapiens.  
OS  
XX  
XX US2003224996-A1.  
PN  
XX  
XX 04-DEC-2003.  
PD  
XX  
XX 17-DEC-2002; 2002US-00321799.  
PF  
XX  
XX 08-APR-1988; 88US-00179406.  
PR 15-AUG-1988; 88US-00232630.  
PR 28-JAN-1992; 92US-00827052.  
PR 21-FEB-1992; 92US-00841646.  
PR 01-NOV-1992; 93US-00147023.  
PR 24-MAY-1995; 95US-00449699.  
PR 04-SEP-1998; 98US-00148925.  
XX  
XX (STYC) STRYKER CORP.  
PA  
XX  
XX Opermann H, Ozkaynak E, Kuberasampath T, Rueger DC, Pang RHL;  
PI WPI: 2004-167144/16.  
DR N-PSDB; ADM80492.  
XX  
XX Osteogenic device for implantation in mammal comprising osteogenic  
PT protein dispersed within biocompatible matrix; osteogenic protein  
PT comprising pair of unglycosylated protein chains, inducing endochondral  
PT bone formation.  
XX  
XX Disclosure; SEQ ID NO 9; 136pp; English.  
PS  
XX The invention relates to an osteogenic device for implantation in mammal,  
CC comprising osteogenic protein dispersed within biocompatible matrix  
CC defining pores, differentiation, and proliferation of migratory  
CC progenitor cells from body of mammal, improvement where osteogenic  
CC protein comprises pair of unglycosylated protein chains disulfide bonded  
CC to produce dimeric species capable of inducing endochondral bone  
CC formation. The device is useful for inducing endochondral bone  
CC formation in a non-union fracture in a mammal, for inducing cartilage or  
CC endochondral bone formation in a mammal, for use in periodontal or  
CC reconstructive procedures, for use in cartilage repair in a mammal,  
CC for inducing cartilage or endochondral bone formation in a mammal,  
CC for inducing cartilage or endochondral bone formation in a mammal,  
CC comprising the step of implanting the mammal at a locus accessible to  
CC migratory progenitor cells. The device is useful for inducing local

CC cartilage bone formation and endochondral bone formation in a non-union  
 CC fracture in a mammal. The antibody capable of binding specifically to the  
 CC osteogenic protein is useful for selectively extracting osteogenic  
 CC protein from a mixture of molecules. The present sequence represents the  
 CC amino acid sequence of the human osteogenic protein, OP1A.  
 XX

SO Sequence 169 AA;

Query Match 100.0%; Score 111; DB 8; Length 169;  
 Best Local Similarity 100.0%; Pred. No. 7.4e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPETHKPCCAPPTQNLNHS 20  
 |||||  
 Db 124 INPETHKPCCAPPTQNLNHS 143

#### RESULT 74

AAB18759 standard; protein; 178 AA.

XX AAB18759;

DT 22-JAN-2001 (first entry)

XX Fusion of subunit D of human osteogenic protein and BPI peptide.

XX BPI, antimicrobial; endotoxin binding agent; neutralizing agent;

XX subunit D; osteogenic protein.

OS Synthetic.

OS Pectobacterium carotovorum.

OS Homo sapiens.

FT Key

FT Peptide

FT Protein

FT Peptide

FT Peptide

FT Peptide

FT Peptide

FT Peptide

FT Peptide

FT Peptide

FT Peptide

FT Peptide

FT Peptide

FT Peptide

FT Peptide

FT Peptide

FT Peptide

FT Peptide

FT Peptide

FT Peptide

FT Peptide

FT Peptide

FT Peptide

CC obtaining recombinant peptides such as bactericidal permeability-  
 CC increasing protein (BPI)-derived peptides from bacterial cells. BPI-  
 CC derived peptides having the activity of BPI are useful as antimicrobial  
 CC agents, as endotoxin binding and neutralizing agents. The present  
 CC sequence represents fusion protein, comprising subunit D of a human  
 CC osteogenic protein and a human BPI derived peptide. The construct is used  
 CC to produce vectors for use in the method of the invention  
 XX

SO Sequence 178 AA;

Query Match 100.0%; Score 111; DB 3; Length 178;  
 Best Local Similarity 100.0%; Pred. No. 7.8e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPETHKPCCAPPTQNLNHS 20  
 |||||  
 Db 116 INPETHKPCCAPPTQNLNHS 135

#### RESULT 75

AAM29297 standard; protein; 179 AA.

XX AAM29297;

DT 20-APR-1998 (first entry)

XX PIN3355 vector construct BPI peptide fusion protein Ser153(BPI).

XX Bactericidal/permeability increasing peptide; BPI; fusion protein;

XX bacterial infection; fungal infection; endotoxin; heparin; angiogenesis;

XX fungicidal; recombinant DNA; vector.

OS Synthetic.

OS Pectobacterium carotovorum.

OS Homo sapiens.

OS Chimeric.

PN WO9735009-A1.

PD 25-SEP-1997.

XX 18-MAR-1997; 97WO-US005287.

XX 22-MAR-1996; 96US-00621803.

XX (XOMA) XOMA CORP.

XX Better MD;

XX WPI; 1997-480215/44.

XX N-PSDB; AAT86335.

XX Recombinant production of bactericidal/permeability increasing protein -

XX by expression as a fusion protein in microbial host cells, then cleaving

XX the BPI peptide from the carrier.

XX Example 1; Page; 186pp; English.

XX A new recombinant DNA vector construct has been developed which encodes a

XX fusion protein and is suitable for introduction into a bacterial host.

XX The vector comprises: (a) DNA encoding at least one cationic

XX bactericidal/permeability increasing peptide (BPI); (b) DNA encoding a

XX carrier protein; and (c) DNA encoding an amino acid (aa) cleavage site

XX located between (a) and (b). The present sequence represents the protein

XX from PIN3355 vector construct coding for a BPI fusion protein. The

XX peptides have many uses including the treatment of bacterial and fungal

CC infections. BPI peptides also bind to endotoxins and heparin,  
 CC neutralising their effects. The peptides have further been shown to  
 CC inhibit angiogenesis (partly due to heparin-binding activity). The fusion  
 CC proteins have been found to be expressed in large amounts without  
 CC significant proteolysis, and in some cases are actually secreted from the  
 CC host cells. This allows the indirect production of anti-microbial BPI

CC peptides in microbial hosts. N.B. The present sequence is not shown in  
CC the specification but is derived from SEQ ID NO:257 on pages 158-159, as  
CC designated on page 23  
XX  
SQ Sequence 179 AA;

Query Match 100.0%; Score 111; DB 2; Length 179;  
Best Local Similarity 100.0%; Pred. No. 7.8e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 INPETHPKPCCAPTQNAIS 20  
116 INPETHPKPCCAPTQNAIS 135

RESULT 76  
AAW29298  
ID AAW29298 standard; protein; 179 AA.

AC AAW29298;  
DT 20-APR-1998 (first entry)  
DE PING3356 vector construct BPI peptide fusion protein Val153(BPI).

KW Bactericidal/permeability increasing peptide; BPI; fusion protein;  
KW bacterial infection; fungal infection; endotoxin; heparin; angiogenesis;  
KW fungicidal; recombinant DNA; vector.

OS Synthetic.  
OS Pectobacterium carotovorum.  
OS Homo sapiens.  
OS Chimeric.

PN WO9735009-A1.  
PD 25-SEP-1997.

PF 18-MAR-1997; 97WO-US005287.  
PR 22-MAR-1996; 96US-00621803.

PA (XOMA ) XOMA CORP.  
PI Better MD;  
PI WPI; 1997-480215/44.  
DR N-PSDB; AAT86335.

PT Recombinant production of bactericidal/permeability increasing protein -  
PT by expression as a fusion protein in microbial host cells, then cleaving  
PT the BPI peptide from the carrier.

PS Example 1; Page; 186pp; English.

XX A new recombinant DNA vector construct has been developed which encodes a  
CC fusion protein and is suitable for introduction into a bacterial host.  
CC The vector comprises: (a) DNA encoding at least one cationic  
CC bactericidal/permeability increasing peptide (BPI), (b) DNA encoding a  
CC carrier protein, and (c) DNA encoding an amino acid (aa) cleavage site  
CC located between (a) and (b). The present sequence represents the protein  
CC from PING3356 vector construct coding for a BPI fusion protein. The  
CC peptides have many uses including the treatment of bacterial and fungal  
CC infections. BPI peptides also bind to endotoxins and heparin,  
CC neutralising their effects. The peptides have further been shown to  
CC inhibit angiogenesis (partly due to heparin-binding activity). The fusion  
CC proteins have been found to be expressed in large amounts without  
CC the significant proteolysis, and in some cases are actually secreted from the  
CC host cells. This allows the indirect production of anti-microbial BPI  
CC peptides in microbial hosts. N.B. The present sequence is not shown in  
CC the specification but is derived from SEQ ID NO:257 on pages 158-159, as  
CC designated on page 23  
XX

SQ Sequence 179 AA;

Query Match 100.0%; Score 111; DB 2; Length 179;  
Best Local Similarity 100.0%; Pred. No. 7.8e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 INPETHPKPCCAPTQNAIS 20  
116 INPETHPKPCCAPTQNAIS 135

RESULT 77  
AAW29299  
ID AAW29299 standard; protein; 179 AA.

AC AAW29299;  
DT 20-APR-1998 (first entry)  
DE PING3357 vector construct BPI peptide fusion protein Phe153(BPI).

KW Bactericidal/permeability increasing peptide; BPI; fusion protein;  
KW bacterial infection; fungal infection; endotoxin; heparin; angiogenesis;  
KW fungicidal; recombinant DNA; vector.

OS Synthetic.  
OS Pectobacterium carotovorum.  
OS Homo sapiens.  
OS Chimeric.

PN WO9735009-A1.  
PD 25-SEP-1997.

PF 18-MAR-1997; 97WO-US005287.  
PR 22-MAR-1996; 96US-00621803.

PA (XOMA ) XOMA CORP.  
PI Better MD;  
PI WPI; 1997-480215/44.  
DR N-PSDB; AAT86335.

PT Recombinant production of bactericidal/permeability increasing protein -  
PT by expression as a fusion protein in microbial host cells, then cleaving  
PT the BPI peptide from the carrier.

PS Example 1; Page; 186pp; English.

XX A new recombinant DNA vector construct has been developed which encodes a  
CC fusion protein and is suitable for introduction into a bacterial host.  
CC The vector comprises: (a) DNA encoding at least one cationic  
CC bactericidal/permeability increasing peptide (BPI), (b) DNA encoding a  
CC carrier protein, and (c) DNA encoding an amino acid (aa) cleavage site  
CC located between (a) and (b). The present sequence represents the protein  
CC from PING3357 vector construct coding for a BPI fusion protein. The  
CC peptides have many uses including the treatment of bacterial and fungal  
CC infections. BPI peptides also bind to endotoxins and heparin,  
CC neutralising their effects. The peptides have further been shown to  
CC inhibit angiogenesis (partly due to heparin-binding activity). The fusion  
CC proteins have been found to be expressed in large amounts without  
CC the significant proteolysis, and in some cases are actually secreted from the  
CC host cells. This allows the indirect production of anti-microbial BPI  
CC peptides in microbial hosts. N.B. The present sequence is not shown in  
CC the specification but is derived from SEQ ID NO:257 on pages 158-159, as  
CC designated on page 23  
XX

SQ Sequence 179 AA;

Query Match 100.0%; Score 111; DB 2; Length 179;  
Best Local Similarity 100.0%; Pred. No. 7.8e-07;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
 |||||  
 DB 116 INPETHKPCCAPTOLNAIS 135

## RESULT 78

AAW29301  
 ID AAW29301 standard; protein; 179 AA.

XX AAW29301;  
 XX  
 DT 20-APR-1998 (first entry)

DE BPI peptide fusion protein pING3796 vector construct protein product.

KW Bactericidal/permeability increasing peptide; BPI; fusion protein;

KW bacterial infection; fungal infection; endotoxin; heparin; angiogenesis;

KW fungicidal; recombinant DNA; vector.

OS Synthetic.

OS Pectobacterium carotovorum.

OS Homo sapiens.

OS Chimeric.

PN W09735009-A1.

PD 25-SEP-1997.

PF 18-MAR-1997; 97WO-US005287.

PR 22-MAR-1996; 96US-00621803.

PA (XOMA ) XOMA CORP.

PI Better MD;

DR WPI: 1997-480215/44.

DR N-PSDB; AAT66337.

PT Recombinant production of bactericidal/permeability increasing protein -  
 by expression as a fusion protein in microbial host cells, then cleaving  
 the BPI peptide from the carrier.

PS Example 1; Page 163-164; 186pp; English.

CC A new recombinant DNA vector construct has been developed which encodes a  
 fusion protein and is suitable for introduction into a bacterial host.

CC The vector comprises: (a) DNA encoding at least one cationic  
 bactericidal/permeability increasing peptide (BPI); (b) DNA encoding a  
 carrier protein; and (c) DNA encoding an amino acid (aa) cleavage site  
 located between (a) and (b). The present sequence represents the protein  
 product from pING3796 vector construct coding for a BPI fusion protein.

CC The peptides have many uses including the treatment of bacterial and  
 fungal infections. BPI peptides also bind to endotoxins and heparin,  
 neutralising their effects. The peptides have further been shown to  
 inhibit angiogenesis (partly due to heparin-binding activity). The fusion  
 proteins have been found to be expressed in large amounts without  
 significant proteolysis, and in some cases are actually secreted from the  
 host cells. This allows the indirect production of anti-microbial BPI  
 peptides in microbial hosts

XX Sequence 179 AA;

Query Match 100.0%; Score 111; DB 2; Length 179;  
 Best Local Similarity 100.0%; Pred. No. 7.8e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
 |||||  
 DB 116 INPETHKPCCAPTOLNAIS 135

## RESULT 79

AAW29296  
 ID AAW29296 standard; protein; 179 AA.

XX AAW29296;  
 XX

DT 20-APR-1998 (first entry)

DE pING3354 vector construct BPI peptide fusion protein A1a153(BPI).

KW Bactericidal/permeability increasing peptide; BPI; fusion protein;

KW bacterial infection; fungal infection; endotoxin; heparin; angiogenesis;

KW fungicidal; recombinant DNA; vector.

OS Synthetic.

OS Pectobacterium carotovorum.

OS Homo sapiens.

OS Chimeric.

PN W09735009-A1.

PD 25-SEP-1997.

PF 18-MAR-1997; 97WO-US005287.

PR 22-MAR-1996; 96US-00621803.

PA (XOMA ) XOMA CORP.

PI Better MD;

DR WPI: 1997-480215/44.

DR N-PSDB; AAT66335.

PT Recombinant production of bactericidal/permeability increasing protein -  
 by expression as a fusion protein in microbial host cells, then cleaving  
 the BPI peptide from the carrier.

PS Example 1; Page; 186pp; English.

CC A new recombinant DNA vector construct has been developed which encodes a  
 fusion protein and is suitable for introduction into a bacterial host.

CC The vector comprises: (a) DNA encoding at least one cationic  
 bactericidal/permeability increasing peptide (BPI); (b) DNA encoding a  
 carrier protein; and (c) DNA encoding an amino acid (aa) cleavage site  
 located between (a) and (b). The present sequence represents the protein  
 product from pING3354 vector construct coding for a BPI fusion protein. The  
 peptides have many uses including the treatment of bacterial and fungal  
 infections. BPI peptides also bind to endotoxins and heparin,  
 neutralising their effects. The peptides have further been shown to  
 inhibit angiogenesis (partly due to heparin-binding activity). The fusion  
 proteins have been found to be expressed in large amounts without  
 significant proteolysis, and in some cases are actually secreted from the  
 host cells. This allows the indirect production of anti-microbial BPI  
 peptides in microbial hosts. N.B. The present sequence is not shown in  
 the specification but is derived from SEQ ID NO:257 on pages 158-159, as  
 designated on page 23

CC designated on page 23

XX Sequence 179 AA;

Query Match 100.0%; Score 111; DB 2; Length 179;  
 Best Local Similarity 100.0%; Pred. No. 7.8e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
 |||||  
 DB 116 INPETHKPCCAPTOLNAIS 135

RESULT 80  
 AAB18761  
 ID AAB18761 standard; protein; 190 AA.

```

XX
AC AAB18761;
XX
DT 22-JAN-2001 (first entry)
XX
DE Fusion of subunit D of human osteogenic protein and BPI peptide.
XX
KW Fusion protein expression; bactericidal permeability-increasing protein;
KW BPI; antimicrobial; endotoxin binding agent; neutralizing agent;
KW subunit D; osteogenic protein.
XX
OS Synthetic.
OS Pectobacterium carotovorum.
OS Homo sapiens.
XX
PH Key
FT Peptide
FT Location/Qualifiers
FT 1..22
FT /note= "pelB leader sequence from the pectate lyase gene
FT of Erwina carotovora"
FT 23..161
FT /note= "subunit D of human osteogenic protein"
FT Peptide
FT 162..166
FT /note= "spacer"
FT 167..190
FT /note= "human BPI derived peptide"
XX
PN WO20005322-A1.
XX
PD 21-SEP-2000.
XX
PF 17-MAR-2000; 2000WO-US007148.
XX
PR 18-MAR-1999; 99US-00271970.
XX
PA (XOMA ) XOMA TECHNOLOGY LTD.
XX
PI Better MD; Gavitt PD;
XX
DR WPI; 2000-602118/57.
XX
DR N-PSDB; AAT5799.
XX
PT Improved production of recombinant peptides from bacterial cells involves
PT treating bacterial cells with acid to disrupt or lyse the cells and
PT release the peptide from fusion protein.
XX
PS Example 1; Page 45; 53pp; English.
XX
CC The specification describes an improved method for obtaining a peptide
CC from bacterial cells after fusion protein expression in the cells. The
CC method comprises treating the bacterial cells with acid to disrupt or
CC lyse the cells and release the peptide from fusion protein. In a single
CC step, the fusion protein comprises the peptide, and a carrier protein,
CC with an acid-cleavable site between them. The method is useful for
CC obtaining recombinant peptides such as bactericidal permeability-
CC increasing protein (BPI)-derived peptides from bacterial cells. BPI-
CC derived peptides having the activity of BPI are useful as antimicrobial
CC agents, as endotoxin binding and neutralizing agents. The present
CC sequence represents fusion protein, comprising subunit D of a human
CC osteogenic protein and a human BPI derived peptide. The construct is used
CC to produce vectors for use in the method of the invention
XX
SQ Sequence 190 AA;
XX
Query Match 100.0%; Score 111; DB 3; Length 190;
Best Local Similarity 100.0%; Pred. No. 8.3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
QY 1 INPETHKPCCAPTQNLNALS 20
Db 116 INPETHKPCCAPTQNLNALS 135
XX
RESULT 81

```

```

AAW29304
ID AAW29304 standard; protein; 194 AA.
XX
AC AAW29304;
XX
DT 20-APR-1998 (first entry)
XX
DE BPI peptide fusion protein PIN3353 vector construct protein product.
XX
KW Bactericidal/permeability increasing peptide; BPI; fusion protein;
KW bacterial infection; fungal infection; endotoxin; heparin; angiogenesis;
KW fungicidal; recombinant DNA; vector.
XX
OS Synthetic.
OS Pectobacterium carotovorum.
OS Homo sapiens.
OS Chimeric.
XX
PN WO9735009-A1.
XX
PD 25-SEP-1997.
XX
PF 18-MAR-1997; 97WO-US005287.
XX
PR 22-MAR-1996; 96US-00621803.
XX
PA (XOMA ) XOMA CORP.
XX
PI Better MD;
XX
DR WPI; 1997-480215/44.
XX
DR N-PSDB; AAT86342.
XX
PT Recombinant production of bactericidal/permeability increasing protein -
PT by expression as a fusion protein in microbial host cells, then cleaving
PT the BPI peptide from the carrier.
XX
PS Example 1; Page 155-156; 186pp; English.
XX
CC A new recombinant DNA vector construct has been developed which encodes a
CC fusion protein and is suitable for introduction into a bacterial host.
CC The vector comprises: (a) DNA encoding at least one cationic
CC bactericidal/permeability increasing peptide (BPI), (b) DNA encoding a
CC carrier protein, and (c) DNA encoding an amino acid (aa) cleavage site
CC located between (a) and (b). The present sequence represents the protein
CC product from PIN3353 vector construct coding for a BPI fusion protein.
CC The peptides have many uses including the treatment of bacterial and
CC fungal infections. BPI peptides also bind to endotoxins and heparin,
CC neutralising their effects. The peptides have further been shown to
CC inhibit angiogenesis (partly due to heparin-binding activity). The fusion
CC proteins have been found to be expressed in large amounts without
CC significant proteolysis, and in some cases are actually secreted from the
CC host cells. This allows the indirect production of anti-microbial BPI
CC peptides in microbial hosts
XX
SQ Sequence 134 AA;
XX
Query Match 100.0%; Score 111; DB 2; Length 194;
Best Local Similarity 100.0%; Pred. No. 8.5e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
QY 1 INPETHKPCCAPTQNLNALS 20
Db 116 INPETHKPCCAPTQNLNALS 135
XX
RESULT 82
AAW29302
ID AAW29302 standard; protein; 195 AA.
XX
AC AAW29302;
XX
DT 20-APR-1998 (first entry)
XX

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```

XX BPI peptide fusion protein PING3359 vector construct protein product.
XX
XX Bactericidal/permeability increasing peptide: BPI; fusion protein;
XX Bacterial infection; fungal infection; endotoxin; heparin; angiogenesis;
XX fungicidal; recombinant DNA; vector.
XX
XX Synthetic.
XX OS Pectobacterium carotovorum.
XX OS Homo sapiens.
XX OS Chimeric.
XX
XX W09735009-A1.
XX
XX 25-SEP-1997.
XX
XX 18-MAR-1997; 97WO-US005287.
XX
XX 22-MAR-1996; 96US-00621803.
XX
XX (XOMA ) XOMA CORP.
XX
XX Better MD;
XX
XX WPI: 1997-480215/44.
XX
XX N-PSDB; AAT86340.
XX
XX Recombinant production of bactericidal/permeability increasing protein -
XX by expression as a fusion protein in microbial host cells, then cleaving
XX the BPI peptide from the carrier.
XX
XX Example 1, Page 165-167; 186pp; English.
XX
XX A new recombinant DNA vector construct has been developed which encodes a
XX fusion protein and is suitable for introduction into a bacterial host.
XX The vector comprises: (a) DNA encoding at least one cationic
XX bactericidal/permeability increasing peptide (BPI); (b) DNA encoding a
XX carrier protein, and (c) DNA encoding an amino acid (aa) cleavage site
XX located between (a) and (b). The present sequence represents the protein
XX product from PING3359 vector construct coding for a BPI fusion protein.
XX The peptides have many uses including the treatment of bacterial and
XX fungal infections. BPI peptides also bind to endotoxins and heparin,
XX neutralising their effects. The peptides have further been shown to
XX inhibit angiogenesis (partly due to heparin-binding activity). The fusion
XX proteins have been found to be expressed in large amounts without
XX significant proteolysis, and in some cases are actually secreted from the
XX host cells. This allows the indirect production of anti-microbial BPI
XX peptides in microbial hosts
XX
XX Sequence 195 AA;
XX
XX Query Match 100.0%; Score 111; DB 2; Length 195;
XX Best Local Similarity 100.0%; Pred. No. 8, 5e-07;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX 1 INPETHKPCCAPTQNLNALS 20
XX 116 INPETHKPCCAPTQNLNALS 135
XX
XX RESULT 83
XX AAR51656
XX ID AAR51656 standard; protein; 317 AA.
XX
XX AAR51656;
XX
XX 25-MAR-2003 (revised)
XX 01-JUL-2002 (revised)
XX 09-JUN-1995 (first entry)
XX
XX Osteogenic fusion protein 1B OP1B.
XX
XX Osteogenic protein 1A; OP1B; osteoarthritis; osteogenesis;
XX

```

```

XX cartilage and endochondrial bone formation; allograft repair;
XX periodontal, dental and craniofacial reconstruction;
XX non-union fracture repair.
XX
XX Homo sapiens.
XX
XX US5354557-A.
XX
XX 11-OCT-1994.
XX
XX 18-DEC-1992; 92US-00993387.
XX
XX 08-APR-1986; 88US-00179406.
XX 15-AUG-1986; 88US-00232630.
XX 23-FEB-1989; 89US-00315342.
XX 17-OCT-1989; 89US-00422613.
XX 17-OCT-1989; 89US-00422699.
XX 22-FEB-1990; 90US-00483913.
XX 20-AUG-1990; 90US-00569920.
XX 07-SEP-1990; 90US-00579865.
XX 18-OCT-1990; 90US-00599543.
XX 18-OCT-1990; 90US-00600024.
XX 21-NOV-1990; 90US-00616374.
XX 04-DEC-1990; 90US-00621849.
XX 22-FEB-1991; 91US-00660162.
XX 20-DEC-1991; 91US-00810560.
XX 28-JAN-1992; 92US-00827052.
XX 21-FEB-1992; 92US-00841646.
XX
XX (STYC ) STRYKER CORP.
XX
XX Rueger DC, Kuberampath T, Ozkaynak E, Oppermann H;
XX
XX WPI: 1994-324521/40.
XX
XX N-PSDB; AAQ72712.
XX
XX Implantable device for inducing osteogenesis - comprises porous matrix
XX congt. non-glycosylated dimeric, disulphide linked osteogenic protein.
XX
XX Disclosure: Col 99-102; 128pp; English.
XX
XX AAQ72712 encodes AAR51656 the osteogenic fusion protein 1B (OP1B) which
XX includes a MB leader sequence suitable for promoting expression in E.
XX coli. Fragments of the osteogenic unglycosylated polypeptides produced
XX can be disulphide bonded to form dimers, which form an essential
XX component of an osteogenic protein. This protein is dispersed in a
XX biodegradable matrix which can be implanted into a mammalian bone marrow
XX cavity; here it can induce local cartilage, bone and endochondrial bone
XX formation; and it can also accelerate allograft repair. This implant has
XX the advantage of inducing all stages of bone formation and of having a
XX higher specific activity than other known biosynthetic materials. The
XX implant can be used to repair non-union fractures and cartilage; treat
XX osteoarthritis; and aid in periodontal, dental or craniofacial
XX reconstruction. (Updated on 01-JUL-2002 to add missing PA field.)
XX (Updated on 25-MAR-2003 to correct PF field.) (Updated on 25-MAR-2003 to
XX correct PR field.)
XX
XX Sequence 317 AA;
XX
XX Query Match 100.0%; Score 111; DB 2; Length 317;
XX Best Local Similarity 100.0%; Pred. No. 1, 4e-06;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX 1 INPETHKPCCAPTQNLNALS 20
XX 272 INPETHKPCCAPTQNLNALS 291
XX
XX RESULT 84
XX AAR85766
XX ID AAR85766 standard; protein; 317 AA.
XX
XX

```



AC AAR85766;  
 XX  
 DT 25-MAR-2003 (revised)  
 DT 20-JUN-1996 (first entry)  
 XX  
 DE OPIB fusion protein encoded by OPI(b) cDNA.  
 XX  
 KW Human, osteogenic protein, hOP-1; murine, mOP-1; TGF-beta superfamily;  
 KW transforming growth factor-beta; dimer; antibody; epitope; hippocampus;  
 KW purification; implantable osteogenic device; bone formation; craniofacial;  
 KW anomaly; skeletal; dental; endochondral bone formation; MLE leader;  
 KW non-union fracture; cartilage repair; osteoarthritis.  
 XX  
 OS Homo sapiens.  
 OS Becherichia coli.  
 XX  
 FH Key Location/Qualifiers  
 FT Peptide 1..60  
 FT /note= "MLE leader peptide"  
 FT Misc-difference 61  
 FT /note= "Probably included due to a cloning anomaly"  
 FT Protein 62..317  
 FT /note= "Residues 176-431 of hOP-1, represents pro-hOP-1"  
 XX  
 PN US5468845-A.  
 PD 21-NOV-1995.  
 XX  
 PF 01-NOV-1993; 93US-00147023.  
 XX  
 XX 08-APR-1988; 88US-00179406.  
 XX 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 XX  
 PA (STYC ) STRYKER CORP.  
 PI Rueger DC, Kuberasampath T, Oppermann H, Ozkaynak E;  
 DR N-PSDB; AAT02606.  
 XX  
 PT WPI; 1996-010159/01.  
 PT Antihodies with osteogenic protein binding specificity - used in  
 PT purification of osteogenic proteins, and as antigenic proteins.  
 XX  
 PS Disclosure; Col 101-104; 129pp; English.  
 XX  
 XX The sequences given in AAR85765-70 represent fusion proteins comprising  
 CC fragments of human osteogenic proteins. The MLE leader sequence is  
 CC suitable for promoting expression in E. coli. The genes were expressed in  
 CC E. coli under the control of a synthetic TTP promoter-operator to produce  
 CC synthetic inclusion bodies. Constructs containing the Asp-Pro site were  
 CC cleaved with acid. The resulting products were purified, refolded and  
 CC allowed to dimerise. The proteins had osteogenic activity when properly  
 CC folded and dimerised. Antisera were produced against the purified  
 CC proteins. The resulting antibodies had binding specificities for  
 CC osteogenic proteins. The antibodies are capable of binding specifically  
 CC to an epitope of the osteogenic protein and may be used in purification  
 CC protocols. Osteogenic proteins, such as these, may be used in an  
 CC implantable osteogenic device which allows predictable bone formation to

CC correct acquired and congenital craniofacial and other skeletal or dental  
 CC anomalies. They may be used to induce local endochondral bone formation  
 CC in non-union fractures and in other clinical applications including  
 CC dental and periodontal applications where bone formation is required.  
 CC Other potential applications include cartilage repair, e.g. in the  
 CC treatment of osteoarthritis. (Updated on 25-MAR-2003 to correct PR  
 CC field.) (Updated on 25-MAR-2003 to correct PR field.)  
 XX  
 SQ Sequence 317 AA;  
 XX  
 QY  
 DB Query Match 100.0%; Score 111; DB 2; Length 317;  
 DB Best Local Similarity 100.0%; Pred. No. 1.4e-06;  
 DB Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHPPRCAPITOLNALS 20  
 DB 272 INPETHPPRCAPITOLNALS 291  
 XX  
 RESULT 85  
 ID AAM44306  
 AC AAM44306; protein; 317 AA.  
 XX  
 AC AAM44306;  
 DT 27-MAY-1998 (first entry)  
 DT  
 XX  
 DE Human osteogenic fusion protein OPIB.  
 XX  
 KW Human; osteogenic fusion protein; subunit; endochondral bone formation;  
 KW dimeric; recombinant protein;  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 XX  
 XX US5714589-A.  
 XX  
 PD 03-FEB-1998.  
 XX  
 PF 23-MAY-1995; 95US-00447570.  
 XX  
 XX 08-APR-1988; 88US-00179406.  
 XX 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 PR 01-NOV-1993; 93US-00147023.  
 XX  
 PA (STYC ) STRYKER CORP.  
 PI Pang RH, Rueger DC, Kuberasampath T, Oppermann H, Ozkaynak E;  
 XX  
 DR WPI; 1998-158353/14.  
 DR N-PSDB; AAV15209.  
 XX  
 PT Extraction of osteogenic protein from mixture - using antibodies specific  
 PT for novel polypeptide chains useful as subunit(s) of dimeric osteogenic  
 PT protein(s).  
 XX  
 PS Disclosure; Col 101-102; 127pp; English.  
 XX

CC The present sequence represents a human osteogenic fusion protein, which  
 CC is used in the present invention. The present invention describes methods  
 CC for selectively extracting an osteogenic protein (OP) from a mixture. The  
 CC method comprises: (a) exposing the mixture to an antibody that  
 CC specifically binds OP, separating the mixture to an antibody-protein complex  
 CC from the mixture, and dissociating the complex. In the methods OP  
 CC comprises a pair of oxidised subunits that are disulphide-bonded to form  
 CC a dimer, and one of the subunits has an amino acid (aa) sequence  
 CC sufficiently homologous to residues 335-431 of a 431 aa protein  
 CC designated OPs. sequence given in the specification. In dimeric form OP  
 CC is capable of inducing cartilage and endochondral bone formation in a  
 CC mammal when disposed within a matrix implanted in the mammal. The methods  
 CC are used for recovering the recombinant proteins from cell cultures

XX  
 SQ Sequence 317 AA;

Query Match 100.0%; Score 111; DB 2; Length 317;  
 Best Local Similarity 100.0%; Pred. No. 1.4e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNALS 20  
 |||||  
 DB 272 INPETHKPCCAPTQNLNALS 291

RESULT 86  
 AAW89683  
 ID AAW89683 standard; protein; 317 AA.  
 AC AAW89683;  
 XX  
 XX 20-MAR-2003 (revised)  
 DT 24-MAR-1999 (first entry)  
 DE Osteogenic fusion protein OP1B.  
 XX  
 KW Human; osteogenic protein; OP-1; OP; endochondral bone formation;  
 KW cartilage; craniofacial defect; skeletal disorder; dental disorder;  
 KW non-union fracture; osteoarthritis; vascularisation; mineralisation;  
 KW bone marrow differentiation.

OS Homo sapiens.  
 OS Synthetic.  
 OS  
 PN US5863758-A.  
 XX  
 PD 26-JAN-1999.  
 XX  
 PF 23-MAY-1995; 95US-00449700.  
 XX  
 PR 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841666.  
 PR 01-NOV-1993; 93US-00147023.

XX  
 PA (STYC) STRYKER CORP.  
 XX  
 PI Pang RHL, Rueger DC, Kuberasampath T, Ogermann H, Ozkaynak E,

DR WPI: 1999-131303/11.  
 DR N-PSDB; AAX00234.  
 XX  
 PT Nucleic acid encoding mammalian osteogenic proteins in prepro form - able  
 PT to induce cartilage and bone formation when implanted in matrix, useful  
 PT for repairing bone defects.

PS Disclosure; Col 99-102; 127pp; English.

XX  
 CC The present invention describes isolated DNA (I) encoding at least one  
 CC osteogenically active region of human osteogenic protein-1 in prepro form  
 CC (OP1-PP), murine OP1-PP, murine OP2-PP or human OP2-PP. Also described  
 CC are: (A) DNA related to (I) encoding a polypeptide able to form dimers  
 CC that can induce cartilage and endochondral bone formation in a mammal  
 CC when implanted in a matrix; (B) vectors containing (I) or related DNA;  
 CC (C) host cells transformed with this vector; (D) DNA (I') encoding a  
 CC prepro- or pro-OP1, and related vectors and transformed cells; (E)  
 CC osteogenic protein (II) produced by expression of transformed mammalian  
 CC cells, able to induce bone and cartilage formation; (F) mature OP1  
 CC secreted from mammalian cells following expression of the sequence that  
 CC encodes hOP1-PP; and (G) production of an active osteogenic composition  
 CC by truncating mature OP1 protein. Host cells of (C) are used to produce  
 CC proteins able to induce cartilage and bone formation, e.g. for correction  
 CC of acquired or congenital craniofacial defects or other skeletal or  
 CC dental disorders; to heal non-union fractures; to repair cartilage, e.g.  
 CC in osteoarthritis, or generally wherever bone formation is required. The  
 CC proteins induce complete development of endochondral bone, including  
 CC vascularisation, mineralisation and bone marrow differentiation. The  
 CC present sequence represents an osteogenic fusion protein OP1B. (Updated  
 CC on 20-MAR-2003 to correct PA field.)

XX  
 SQ Sequence 317 AA;

Query Match 100.0%; Score 111; DB 2; Length 317;  
 Best Local Similarity 100.0%; Pred. No. 1.4e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNALS 20  
 |||||  
 DB 272 INPETHKPCCAPTQNLNALS 291

RESULT 87  
 AAY43117  
 ID AAY43117 standard; protein; 317 AA.  
 AC AAY43117;  
 XX  
 XX 16-DEC-1999 (first entry)  
 DT  
 DE Osteogenic protein OP1B fusion protein sequence.  
 XX  
 KW Chondrogenic protein; biodegradable matrix; cell proliferation;  
 KW cell differentiation; migratory progenitor cell; cartilage formation;  
 KW allogenic implant; xenogenic implant; endochondral bone formation;  
 KW osteogenic protein.

OS Synthetic.  
 OS  
 PN US5958441-A.  
 XX  
 PD 28-SEP-1999.  
 XX  
 PF 24-MAY-1995; 95US-00449699.  
 XX  
 PR 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.

PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 28-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 PR 22-DEC-1992; 92US-00995345.  
 PR 01-NOV-1993; 93US-00147023.  
 XX (STYC ) STRYKER BIOTECH CORP.  
 PI Rueger DC, Pang RHL, Kuberasampath T, Ozkaynak E, Oppermann H,  
 DR WPI; 1999-589530/50.  
 DR N-PSDB; AA227585.  
 XX Implant for mammals permitting the influx, proliferation and  
 PT differentiation of migratory progenitor cells, useful for inducing  
 PT endochondral bone formation in mammals.  
 XX Disclosure; Col 97-100; 127pp; English.  
 XX This sequence is an osteogenic protein 1B (OP1B) fusion protein. The  
 CC invention relates to a device for implantation in a mammal comprising a  
 CC chondrogenic protein (I) dispersed within a biocompatible, in vivo  
 CC degradable matrix defining pores which permits the influx, proliferation  
 CC and differentiation of migratory progenitor cells, where (I) comprises a  
 CC substantially pure protein with the amino acid sequence VPRPCAP, which  
 CC is capable of inducing cartilage formation. The device is used as an  
 CC allogenic or xenogenic implant for the induction endochondral bone  
 CC formation in mammals  
 XX Sequence 317 AA;  
 SQ  
 Query Match 100.0%; Score 111; DB 2; Length 317;  
 Best Local Similarity 100.0%; Pred. No. 1.4e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETYKPCCAPTOLNAIS 20  
 DB 272 INPETYKPCCAPTOLNAIS 291

RESULT 88  
 ADJ62686  
 ID ADJ62686 standard; protein; 317 AA.  
 XX ADJ62686;  
 AC  
 XX 06-MAY-2004 (first entry)  
 DT  
 XX Human osteogenic protein 1B, OP1B.  
 DE  
 XX human; osteogenic protein 1B; OP1B; osteogenic device;  
 KW endochondral bone formation; bone repair; cartilage repair;  
 KW vascularisation; mineralisation; bone marrow differentiation.  
 XX Homo sapiens.  
 OS  
 XX US6551995-B1.  
 AC  
 XX 22-APR-2003.  
 PD  
 XX 04-SEP-1998; 98US-00148925.  
 PF  
 XX 08-APR-1998; 88US-00179406.  
 PR 15-AUG-1988; 88US-00323630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422623.

PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00589920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 PR 01-NOV-1993; 93US-00147023.  
 PR 24-MAY-1995; 95US-00449699.  
 XX (STYC ) STRYKER CORP.  
 PA Oppermann H, Ozkaynak E, Kuberasampath T, Rueger DC, Pang RHL,  
 PI WPI; 2003-575998/54.  
 DR N-PSDB; ADJ62685.  
 XX Osteogenic device useful for inducing endochondral bone formation in  
 PT mammals, comprises ceramic or biodegradable non-collagen polymer matrix  
 PT containing substantially pure natural-sourced mammalian osteogenic  
 PT protein.  
 XX Disclosure; SEQ ID NO 11; 127pp; English.  
 XX This invention relates to an osteogenic device for implantation in a  
 CC mammal, comprising a ceramic or biodegradable non-collagen polymer matrix  
 CC defining pores of a dimension sufficient to permit influx,  
 CC differentiation and proliferation of migratory progenitor cells from the  
 CC body of mammal, and a substantially pure osteogenic protein competent to  
 CC induce endochondral bone formation when disposed in the matrix and  
 CC implanted in mammal. The device is useful for producing endochondral bone  
 CC formation in mammals, for bone and cartilage repair, for inducing the  
 CC full developmental cascade of endochondral bone formation including  
 CC vascularisation, mineralisation and bone marrow differentiation at the  
 CC locus of an implant when implanted in a mammalian body. The device is  
 CC useful for bone formation in various orthopedic, periodontal and  
 CC reconstructive procedures. The present sequence represents the amino acid  
 CC sequence of human osteogenic protein 1B, OP1B.  
 XX Sequence 317 AA;  
 SQ  
 Query Match 100.0%; Score 111; DB 7; Length 317;  
 Best Local Similarity 100.0%; Pred. No. 1.4e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETYKPCCAPTOLNAIS 20  
 DB 272 INPETYKPCCAPTOLNAIS 291

RESULT 89  
 ADJ62757  
 ID ADJ62757 standard; protein; 317 AA.  
 XX ADJ62757;  
 AC  
 XX 29-JAN-2004 (first entry)  
 DT  
 XX Human osteogenic protein, OP1B fusion.  
 DE  
 XX Human; osteogenic protein; OP1; BMP2A; BMP2B; osteogenic device;  
 KW endochondral bone formation; cartilage formation; non-union fracture;  
 KW cartilage repair; dental reconstructive procedure.  
 XX Chimeric.  
 OS Homo sapiens.  
 OS Escherichia coli.

XX US2003069401-A1.  
XX 10-APR-2003.  
XX 24-OCT-1997; 97US-00957425.  
XX 08-APR-1988; 88US-00179406.  
XX 15-AUG-1988; 88US-00232630.  
XX 23-FEB-1989; 89US-00315342.  
XX 17-OCT-1989; 89US-00422613.  
XX 22-FEB-1990; 90US-00483913.  
XX 20-AUG-1990; 90US-0069920.  
XX 18-OCT-1990; 90US-00599543.  
XX 18-OCT-1990; 90US-00600024.  
XX 21-NOV-1990; 90US-00616374.  
XX 04-DEC-1990; 90US-00621849.  
XX 04-DEC-1990; 90US-00621988.  
XX 22-FEB-1991; 91US-00660162.  
XX 20-DEC-1991; 91US-00810560.  
XX 28-JAN-1992; 92US-00827052.  
XX 21-FEB-1992; 92US-00841646.  
XX 22-DEC-1992; 92US-00995345.  
XX 01-NOV-1993; 93US-00147023.  
XX 23-MAY-1995; 95US-00447570.  
XX (OPPE/) OPPERMAN H.  
XX (OZKA/) OZKAYNAK E.  
XX (KUBER/) KUBERASAMPATH T.  
XX (RUEG/) RUEGER D C.  
XX (PANG/) PANG R H L.  
XX Opperman H, Ozkaynak E, Kuberasampath T, Rueger DC, Pang RHL;  
XX WPI: 2004-008898/01.  
XX P-PSDB: ADE52756.  
XX Osteogenic device for inducing endochondral bone formation, has  
XX PT osteogenic protein comprising a pair of unglycosylated protein chains  
XX PT disulfide bonded to produce dimeric species, dispersed within  
XX PT biocompatible matrix.  
XX  
XX Disclosure; SEQ ID NO 11; 130pp; English.  
XX  
XX The invention relates to an osteogenic device for implantation in a  
XX CC mammal, comprising osteogenic protein (OP) dispersed within a  
XX CC biocompatible, in vivo biodegradable matrix, where OP comprises a pair  
XX CC (P) of unglycosylated protein chains disulfide bonded to produce dimeric  
XX CC species having a conformation so that (P) is capable of inducing  
XX CC endochondral bone formation in mammal when disposed in the matrix and  
XX CC accessible to the cells. Also included are substantially a pure mammalian  
XX CC osteogenic protein (comprising a pair of unglycosylated polypeptide  
XX CC chains and capable of inducing endochondral bone formation in association  
XX CC with a matrix when implanted in a mammal, where the osteogenic protein  
XX CC comprises peptides derived from human or mouse OP1), a DNA sequence  
XX CC encoding a protein capable of inducing endochondral bone formation in a  
XX CC mammal, a vector comprising the DNA, a host cell harbouring and capable  
XX CC of expressing (DNA or vector), an osteogenic protein as defined above  
XX CC expressed from recombinant DNA in a host cell, and a polypeptide chain useful  
XX CC as a subunit of a dimeric osteogenic protein and an antibody (Ab) capable  
XX CC of binding specifically to an epitope on the osteogenic proteins. The  
XX CC osteogenic device is useful for inducing local cartilage and bone  
XX CC formation, for endochondral bone formation in a mammal, for inducing  
XX CC cartilage or endochondral bone formation in a mammal, or for inducing  
XX CC endochondral bone formation in a non-union fracture in a mammal. The  
XX CC osteogenic device is useful for cartilage repair in a mammal, in  
XX CC periodontal or dental reconstructive procedures, or in endochondral bone  
XX CC reconstructive procedures. The antibody is useful for selectively  
XX CC extracting osteogenic protein from a mixture of molecules. The host cell  
XX CC is useful for producing a protein by recombinant gene expression. The  
XX CC osteogenic proteins are useful to raise monoclonal are polyclonal  
XX CC antibodies capable of specifically binding to an epitope of the

CC osteogenic protein. The present sequence represents a human osteogenic  
CC protein as a fusion protein with an E. coli leader sequence for  
CC heterologous expression. Note: The claims refer to regions of mouse and  
CC human osteogenic proteins which are functional in the osteogenic device,  
CC however the authors refer to a DNA SEQ ID number where they really mean  
CC to refer to a protein.  
XX  
XX SQ Sequence 317 AA;  
XX  
XX Query Match 100.0%; Score 111; DB 8; Length 317;  
XX Best Local Similarity 100.0%; Pred. No. 1.4e-06;  
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
XX  
XX 1 INPETHKPCCAPTQNLNIS 20  
XX 272 INPETHKPCCAPTQNLNIS 291  
XX  
XX RESULT 90  
XX ADM80495  
XX ID ADM80495 standard; protein, 317 AA.  
XX  
XX ADM80495;  
XX  
XX 03-UN-2004 (first entry)  
XX  
XX Human osteogenic protein, OP1B.  
XX  
XX human; osteogenic device; osteogenic protein; OP1B; biocompatible matrix;  
XX endochondral bone formation; non-union fracture; cartilage formation;  
XX periodontal reconstructive procedure; dental reconstructive procedure;  
XX cartilage repair.  
XX  
XX Homo sapiens.  
XX  
XX US2003224996-A1.  
XX  
XX 04-DEC-2003.  
XX  
XX 17-DEC-2002; 2002US-00321799.  
XX  
XX 08-APR-1988; 88US-00179406.  
XX 15-AUG-1988; 88US-00232630.  
XX 28-JAN-1992; 92US-00827052.  
XX 21-FEB-1992; 92US-00841646.  
XX 01-NOV-1993; 93US-00147023.  
XX 24-MAY-1995; 95US-00449699.  
XX 04-SEP-1998; 98US-00148925.  
XX  
XX (STYC ) STRYKER CORP.  
XX  
XX Opperman H, Ozkaynak E, Kuberasampath T, Rueger DC, Pang RHL;  
XX WPI: 2004-167144/16.  
XX N-PSDB: ADM80494.  
XX  
XX Osteogenic device for implantation in mammal comprising osteogenic  
XX PT protein dispersed within biocompatible matrix, osteogenic protein  
XX PT comprising pair of unglycosylated protein chains, inducing endochondral  
XX PT bone formation.  
XX  
XX Disclosure; SEQ ID NO 11; 136pp; English.  
XX  
XX The invention relates to an osteogenic device for implantation in mammal,  
XX CC comprising osteogenic protein dispersed within biocompatible matrix  
XX CC defining pores, differentiation, and proliferation of migratory  
XX CC progenitor cells from body of mammal, improvement where osteogenic  
XX CC protein comprises pair of unglycosylated protein chains disulfide bonded  
XX CC to produce dimeric species capable of inducing endochondral bone  
XX CC formation. The device is useful for inducing endochondral bone  
XX CC formation in a non-union fracture in a mammal, for inducing cartilage or  
XX CC endochondral bone formation in a mammal, for use in periodontal or dental  
XX CC reconstructive procedures, for use in cartilage repair in a mammal, for

CC use in endochondral bone reconstructive procedures. The device is useful  
 CC for inducing cartilage or endochondral bond formation in a mammal  
 CC comprising the step of implanting the mammal at a locus accessible to  
 CC migratory progenitor cells. The device is useful for inducing local  
 CC cartilage bone formation and endochondral bone formation in a non-union  
 CC fracture in a mammal. The antibody capable of binding specifically to the  
 CC osteogenic protein is useful for selectively extracting osteogenic  
 CC protein from a mixture of molecules. The present sequence represents the  
 CC amino acid sequence of the human osteogenic protein, OP1B.  
 XX  
 SQ Sequence 317 AA;  
 Query Match 100.0%; Score 111; DB 8; Length 317;  
 Best Local Similarity 100.0%; Pred. No. 1.4e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPBTVPKPCCAPTQLNAIS 20  
 DB 272 INPBTVPKPCCAPTQLNAIS 291  
 RESULT 91  
 ADO05621  
 ID ADO05621 standard; protein; 365 AA.  
 XX  
 AC ADO05621;  
 XX  
 DT 15-JUL-2004 (first entry)  
 XX  
 DE Human EXMES polypeptide (ID 7521939CD1).  
 XX  
 KW EXMES: extracellular messenger; transgenic; human; anti-HIV; anabolic;  
 KW hypertensive; anti-allergic; antianemic; antidiabetic;  
 KW antidiabetic; antidiabetic; nephrotropic; antidiabetic; muscular;  
 KW immunosuppressive; antidiabetic; nephrotropic; antidiabetic; muscular;  
 KW neuroprotective; ophthalmological; uropathic; cytoskeletal; endocrine;  
 KW antineoplastic; antineoplastic; antineoplastic; antineoplastic;  
 KW antineoplastic; vasotropic; anticoagulant; thrombolytic; vaccine;  
 KW gene therapy.  
 XX  
 OS Homo sapiens.  
 XX  
 PN WO2004033637-A2.  
 XX  
 PD 22-APR-2004.  
 XX  
 PF 03-OCT-2003; 2003WO-US031535.  
 XX  
 PR 04-OCT-2002; 2002US-0416004P.  
 PR 08-NOV-2002; 2002US-0424862P.  
 XX  
 PA (INCY-) INCYTE CORP.  
 XX  
 PI Elliott VS, Emerging BM, Lindquist EA, Khare R, Chawla NK;  
 PI Ramkumar J, Lee ST, Tran UK, Richardson TW, Marquis JP, Swarnakar A;  
 XX  
 DR WPI; 2004-340907/31.  
 DR N-PSDB; ADO05636.  
 XX  
 PT New isolated polypeptide, useful for diagnosing, preventing, or treating  
 PT autoimmune/inflammatory disorders (e.g., AIDS), cell proliferative  
 PT disorders (e.g., burstis) and endocrine disorders (e.g., dwarfism).  
 XX  
 PS Claim 1; SEQ ID NO 12; 137bp; English.  
 CC The invention relates to human extracellular messenger (EXMES)  
 CC polypeptide and encoding polynucleotides. The EXMES polypeptides can be  
 CC expressed by standard recombinant methodology. Compositions comprising  
 CC EXMES, specific antibodies are useful for treating a disease or condition  
 CC associated with decreased expression of functional extracellular  
 CC messengers. The polypeptide and its encoding polynucleotide is useful for  
 CC diagnosing, preventing and treating autoimmune/inflammatory disorders  
 CC such as AIDS, Addison's disease, allergies, anaemia, asthma.

CC atherosclerosis, Crohn's disease, atopic dermatitis, diabetes mellitus,  
 CC glomerulonephritis, Grave's disease, myasthenia gravis, Reiter's  
 CC syndrome, Werner syndrome, rheumatoid arthritis, Sjogren's syndrome,  
 CC multiple sclerosis, ulcerative colitis, a cell proliferative disorder  
 CC such as actinic keratosis, arteriosclerosis, burstis, cirrhosis,  
 CC hepatitis, myelofibrosis, psoriasis, cancers, and endocrine disorders  
 CC such as aneurysm, vascular malformation, thrombosis, Sheehan syndrome,  
 CC Kallman's disease, and dwarfism. The oligonucleotide primers derived from  
 CC the polynucleotides encoding the polypeptide is useful in transfect  
 CC single nucleotide polymorphisms. The microarray is useful in transfect  
 CC imaging techniques which monitor the relative expression levels of large  
 CC number of genes simultaneously. The polypeptide may be used to generate  
 CC hybridization probes useful in mapping the naturally occurring genomic  
 CC sequence and for screening libraries of compounds in any of a variety of  
 CC drug screening techniques. The present sequence represents a human EXMES  
 CC polypeptide.  
 XX  
 SQ Sequence 365 AA;  
 Query Match 100.0%; Score 111; DB 8; Length 365;  
 Best Local Similarity 100.0%; Pred. No. 1.6e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPBTVPKPCCAPTQLNAIS 20  
 DB 320 INPBTVPKPCCAPTQLNAIS 339  
 RESULT 92  
 AAR44752  
 ID AAR44752 standard; protein; 408 AA.  
 XX  
 AC AAR44752;  
 XX  
 DT 25-MAR-2003 (revised)  
 DT 01-JUL-2002 (revised)  
 DT 06-JUN-1994 (first entry)  
 XX  
 DE Osteogenic fusion protein OP1D.  
 XX  
 KW Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;  
 KW vascularisation; mineralisation; differentiation.  
 XX  
 OS Homo sapiens.  
 XX  
 PN US5266683-A.  
 XX  
 PD 30-NOV-1993.  
 XX  
 PF 21-FEB-1992; 92US-00841646.  
 XX  
 PR 08-AER-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621968.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 29-JAN-1992; 92US-00827052.  
 FT Key Location/Qualifiers  
 FT Region 1..13  
 FT Region /label= leader sequence.  
 FT Region 14..408  
 FT Region /note="Pro form of OP1."

XX (STYC) STRYKER CORP.  
 PA  
 XX  
 PI Kuberassampath T, Ozkaynak E, Rueger DC, Pang RHL, Oppermann H;  
 DR WPI; 1993-395405/49.  
 DR N-PSDB; AA03148.  
 PT New pure mammalian osteogenic proteins - induce cartilage and  
 PT endochondral bone formation when in association with a matrix.  
 XX  
 PS Disclosure; Col 111-116; 128pp; English.  
 XX  
 CC The fusion protein encodes the entire pro form of OPI (residues 39-431 of  
 CC AAR4746) linked via an Asp-Pro cleavage site to a leader sequence  
 CC (residues 1-13) suitable for promoting expression in E. coli. The protein  
 CC when in association with a matrix can induce at the locus of an implant  
 CC the full development cascade of endochondral bone formation including  
 CC vascularisation, mineralisation and bone marrow differentiation. The  
 CC osteogenic protein can also be used to repair both bone and cartilage in  
 CC the treatment of osteoarthritis. (Updated on 01-JUL-2002 to add missing  
 CC PA field.) (Updated on 25-MAR-2003 to correct PF field.) (Updated on 25-  
 CC MAR-2003 to correct PR field.)  
 CC  
 SQ Sequence 408 AA;  
 Query Match 100.0%; Score 111; DB 2; Length 408;  
 Best Local Similarity 100.0%; Pred. No. 1.7e-06; Mismatches 0;  
 Matches 20; Conservative 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTQNAIS 20  
 Db 363 INPETHKPCCAPTQNAIS 382  
 RESULT 93  
 AAR51658  
 ID AAR51658 standard; protein; 408 AA.  
 XX  
 AC AAR51658;  
 XX  
 DT 25-MAR-2003 (revised)  
 DT 01-JUL-2002 (revised)  
 DT 09-JUN-1995 (first entry)  
 XX  
 DE Osteogenic fusion protein 1D OPID.  
 XX  
 KW Osteogenic protein 1D; OPID; osteoarthritis; osteogenesis;  
 KW cartilage and endochondral bone formation; allograft repair;  
 KW periodontal, dental and craniofacial reconstruction;  
 KW non-union fracture repair.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT Peptide 1..16  
 FT /label= sig\_peptide  
 FT /note= "leader sequence (short TRP)"  
 XX  
 PN US5354557-A.  
 PD 11-OCT-1994.  
 PF 18-DEC-1992; 92US-00993387.  
 XX  
 PR 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.

PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 XX  
 PA (STYC) STRYKER CORP.  
 XX  
 PI Rueger DC, Kuberassampath T, Ozkaynak E, Oppermann H;  
 DR WPI; 1994-324521/40.  
 DR N-PSDB; AA072714.  
 XX  
 PT Implantable device for inducing osteogenesis - comprises porous matrix  
 PT contg. non-glycosylated dimeric, disulphide linked osteogenic protein.  
 PS Disclosure; Col 111-114; 128pp; English.  
 XX  
 CC AA072714 encodes AAR51658 the osteogenic fusion protein 1D (OPID) which  
 CC includes a "short TRP" leader sequence suitable for promoting expression  
 CC in E. coli. Fragments of the osteogenic unglycosylated polypeptides  
 CC produced can be disulphide bonded to form dimers, which form an essential  
 CC component of an osteogenic protein. This protein is dispersed in a  
 CC biodegradable matrix which can be implanted into a mammalian bone marrow  
 CC cavity, here it can induce local cartilage, bone and endochondral bone  
 CC formation; and it can also accelerate allograft repair. This implant has  
 CC the advantage of inducing all stages of bone formation and of having a  
 CC higher specific activity than other known biosynthetic materials. The  
 CC implant can be used to repair non-union fractures and cartilage; treat  
 CC osteoarthritis; and aid in periodontal, dental or craniofacial  
 CC reconstruction. (Updated on 01-JUL-2002 to add missing PA field.)  
 CC (Updated on 25-MAR-2003 to correct PF field.) (Updated on 25-MAR-2003 to  
 CC correct PR field.)  
 CC  
 SQ Sequence 408 AA;  
 Query Match 100.0%; Score 111; DB 2; Length 408;  
 Best Local Similarity 100.0%; Pred. No. 1.7e-06; Mismatches 0;  
 Matches 20; Conservative 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTQNAIS 20  
 Db 363 INPETHKPCCAPTQNAIS 382  
 RESULT 94  
 AAR85768  
 ID AAR85768 standard; protein; 408 AA.  
 XX  
 AC AAR85768;  
 XX  
 DT 25-MAR-2003 (revised)  
 DT 20-JUN-1996 (first entry)  
 XX  
 DE OPID fusion protein encoded by OPI(4) cDNA.  
 XX  
 KW Human; osteogenic protein; hOP-1; murine; MOP-1; TGF-beta superfamily;  
 KW transforming growth factor-beta; dimer; antibody; epitope; hippocampus;  
 KW purification; implantable osteogenic device; bone formation; craniofacial;  
 KW anomaly; skeletal; dental; endochondral bone formation; MBS leader;  
 KW non-union fracture; cartilage repair; osteoarthritis.  
 XX  
 OS Homo sapiens.  
 OS Escherichia coli.  
 OS  
 FH Key Location/Qualifiers  
 FT Peptide 1..13  
 FT /note= "Short TRP leader peptide"  
 FT Cleavage-site 14..15

## RESULT 95

363 INPETHKPCCAPTQLNAIS 382

100

QY 1 INPETHKPCCAPTOLNAIS 20  
 |||||  
 Db 363 INPETHKPCCAPTOLNAIS 382

RESULT 96  
 AAM89685  
 ID AAM89685 standard; protein; 408 AA.  
 AC AAM89685;  
 XX  
 DT 20-MAR-2003 (revised)  
 DT 24-MAR-1999 (first entry)  
 XX  
 DE Osteogenic fusion protein OPID.  
 XX  
 KW Human; osteogenic protein; OP-1; OPX; endochondral bone formation;  
 KW cartilage; craniofacial defect; skeletal disorder; dental disorder;  
 KW non-union fracture; osteoarthritis; vasculitis; mineralisation;  
 KW bone marrow differentiation.  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 XX  
 PN US5863758-A.  
 PD 26-JAN-1993.  
 PD 23-MAY-1995; 95US-00449700.  
 PF 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621888.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 PR 01-NOV-1993; 93US-00147023.  
 XX  
 PA (STRYKER) STRYKER CORP.  
 XX  
 PI Pang RHL, Rueger DC, Kuberasampath T, Oppermann H, Ozkaynak E;  
 XX  
 DR WPI, 1999-131303/11.  
 DR N-PSDB; AAX00236.  
 XX  
 PT Nucleic acid encoding mammalian osteogenic proteins in prepro form - able  
 PT to induce cartilage and bone formation when implanted in matrix, useful  
 PT for repairing bone defects.  
 XX  
 PS Disclosure; Col 111-114; 127PP; English.  
 XX  
 CC The present invention describes isolated DNA (I) encoding at least one  
 CC osteogenically active region of human osteogenic protein-1 in prepro form  
 CC (OP1-PP), murine OP1-PP, murine OP2-PP or human OP2-PP. Also described  
 CC are: (A) DNA related to (I) encoding a polypeptide able to form dimers  
 CC that can induce cartilage and endochondral bone formation in a mammal  
 CC when implanted in a matrix; (B) vectors containing (I) or related DNA;  
 CC (C) host cells transformed with this vector; (D) DNA (I') encoding a  
 CC prepro- or pro-OP1, and related vectors and transformed cells; (E)  
 CC osteogenic protein (II) produced by expression of transformed mammalian  
 CC cells able to induce bone and cartilage formation; (F) mature OP1  
 CC secreted from mammalian cells following expression of the sequence that

CC encodes hOP1-PP; and (G) production of an active osteogenic composition  
 CC by truncating mature OP1 protein. Host cells of (C) are used to produce  
 CC proteins able to induce cartilage and bone formation, e.g. for correction  
 CC of acquired or congenital craniofacial defects or other skeletal or  
 CC dental disorders; to heal non-union fractures; to repair cartilage, e.g.  
 CC in osteoarthritis, or generally wherever bone formation is required. The  
 CC proteins induce complete development of endochondral bone, including  
 CC vascularisation, mineralisation and bone marrow differentiation. The  
 CC present sequence represents an osteogenic fusion protein OPID. (Updated  
 CC on 20-MAR-2003 to correct PA field.)  
 XX  
 SQ Sequence 408 AA;  
 XX  
 QY Query Match 100.0%; Score 111; DE 2; Length 408;  
 Best Local Similarity 100.0%; Pred. No. 1.7e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 Db 363 INPETHKPCCAPTOLNAIS 382

RESULT 97  
 AAY43119  
 ID AAY43119 standard; protein; 408 AA.  
 AC AAY43119;  
 DT 16-DEC-1999 (first entry)  
 DE Osteogenic protein OPID fusion protein sequence.  
 KW Chondrogenic protein; biodegradable matrix; cell proliferation;  
 KW cell differentiation; migratory progenitor cell; cartilage formation;  
 KW allogenic implant; xenogenic implant; endochondral bone formation;  
 KW osteogenic protein.  
 XX  
 OS Synthetic.  
 OS  
 PN US5858441-A.  
 PD 28-SEP-1999.  
 PD 24-MAY-1995; 95US-00449699.  
 PF 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621888.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 PR 22-DEC-1992; 92US-00953425.  
 PR 01-NOV-1993; 93US-00147023.  
 XX  
 PA (STRYKER) STRYKER BIOTECH CORP.  
 XX  
 PI Rueger DC, Pang RHL, Kuberasampath T, Ozkaynak E, Oppermann H;  
 XX  
 DR WPI, 1999-589530/50.  
 DR N-PSDB; AAZ27587.  
 XX  
 PT Implant for mammals permitting the influx, proliferation and



PT differentiation of migratory progenitor cells, useful for inducing  
 PT endochondral bone formation in mammals.  
 XX  
 PS Disclosure, Col 109-112, 127pp, English.  
 XX  
 CC This sequence is an osteogenic protein ID (OPID) fusion protein. The  
 CC invention relates to a device for implantation in a mammal comprising a  
 CC chondrogenic protein (I) dispersed within a biocompatible, in vivo  
 CC degradable matrix defining pores which permits the influx, proliferation  
 CC and differentiation of migratory progenitor cells, where (I) comprises a  
 CC substantially pure protein with the amino acid sequence VPPKCAPTQ, which  
 CC is capable of inducing cartilage formation. The device is used as an  
 CC allogenic or xenogenic implant for the induction endochondral bone  
 CC formation in mammals  
 XX  
 SQ Sequence 408 AA;  
 Query Match 100.0%; Score 111; DB 2; Length 408;  
 Best Local Similarity 100.0%; Pred. No. 1.7e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTQLNLAIS 20  
 DB 363 INPETHKPCCAPTQLNLAIS 362  
 RESULT 98  
 ID ADJ62690 standard; protein; 408 AA.  
 XX  
 AC ADJ62690;  
 XX  
 DT 06-MAY-2004 (first entry)  
 XX  
 DE Human osteogenic protein ID, OPID.  
 XX  
 KW human, osteogenic protein ID; OPID; osteogenic device;  
 KW endochondral bone formation; bone repair; cartilage repair;  
 KW vascularisation; mineralisation; bone marrow differentiation.  
 XX  
 OS Homo sapiens.  
 XX  
 PN US6551995-B1.  
 XX  
 FD 22-APR-2003.  
 XX  
 PF 04-SEP-1998; 98US-00148925.  
 XX  
 PR 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 20-DEC-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 PR 01-NOV-1993; 93US-00147023.  
 PR 24-MAY-1995; 95US-00449699.  
 XX  
 PA (STYC ) STRYKER CORP.  
 XX  
 PI Oppermann H, Ozkaynak E, Kuberassampath T, Rueger DC, Pang RHL,  
 XX

DR WPI; 2003-575998/54.  
 DR N-PSDB; ADJ62689.  
 XX  
 PT Osteogenic device useful for inducing endochondral bone formation in  
 PT mammals; comprises ceramic or biodegradable non-collagen polymer matrix  
 PT containing substantially pure natural-sourced mammalian osteogenic  
 PT protein.  
 XX  
 PS Disclosure; SEQ ID NO 15; 127pp; English.  
 XX  
 CC The invention relates to an osteogenic device for implantation in a  
 CC mammal, comprising a ceramic or biodegradable non-collagen polymer matrix  
 CC defining pores of a dimension sufficient to permit influx,  
 CC differentiation and proliferation of migratory progenitor cells from the  
 CC body of mammal, and a substantially pure osteogenic protein competent to  
 CC induce endochondral bone formation when disposed in the matrix and  
 CC implanted in mammal. The device is useful for producing endochondral bone  
 CC formation in mammals, for bone and cartilage repair, for inducing the  
 CC full developmental cascade of endochondral bone formation including  
 CC vascularisation, mineralisation and bone marrow differentiation at the  
 CC locus of an implant when implanted in a mammalian body. The device is  
 CC useful for bone formation in various orthopedic, periodontal and  
 CC reconstructive procedures. The present sequence represents the amino acid  
 CC sequence of human osteogenic protein ID, OPID.  
 XX  
 SQ Sequence 408 AA;  
 Query Match 100.0%; Score 111; DB 7; Length 408;  
 Best Local Similarity 100.0%; Pred. No. 1.7e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTQLNLAIS 20  
 DB 363 INPETHKPCCAPTQLNLAIS 362  
 RESULT 99  
 ID ADE52761 standard; protein; 408 AA.  
 XX  
 AC ADE52761;  
 XX  
 DT 29-JAN-2004 (first entry)  
 XX  
 DE Human osteogenic protein, OPID fusion.  
 XX  
 KW Human; osteogenic protein; OP1; CBMP2A; CBMP2B; osteogenic device;  
 KW endochondral bone formation; cartilage formation; non-union fracture;  
 KW cartilage repair; dental reconstructive procedure.  
 XX  
 OS Chimeric.  
 OS Homo sapiens.  
 OS Escherichia coli.  
 XX  
 PN US2003069401-A1.  
 XX  
 PD 10-APR-2003.  
 XX  
 PF 24-OCT-1997; 97US-00957425.  
 XX  
 PR 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 18-OCT-1990; 90US-00616374.  
 PR 21-NOV-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 22-FEB-1991; 91US-00660162.  
 XX

PR 20-DEC-1991; 91US-00810560.  
XX 28-JAN-1992; 92US-00827052.  
PR 21-FEB-1992; 92US-00841646.  
PR 22-DEC-1992; 92US-0095345.  
PR 01-NOV-1993; 93US-00147023.  
PR 23-MAY-1995; 95US-00447570.  
XX  
PA (OPBE/) OPPERMAN H.  
PA (OZKA/) OZKAYNAK E.  
PA (KUBE/) KUBERASAMPATH T.  
PA (RUEG/) RUEGER D C.  
PA (PANG/) PANG R H L.  
XX  
PI Opperman H, Ozkaynak E, Kuberasampath T, Rueger DC, Pang RHL;  
XX WPI; 2004-008898/01.  
XX P-PSDB; ADE52760.  
XX  
PT Osteogenic device for inducing endochondral bone formation, has  
PT disulfide bonded to produce dimeric species, dispersed within  
PT biocompatible matrix.  
XX  
PS Disclosure; SEQ ID NO 15; 130pp; English.  
XX  
XX The invention relates to an osteogenic device for implantation in a  
XX mammal, comprising osteogenic protein (OP) dispersed within a  
XX biocompatible, in vivo biodegradable matrix, where OP comprises a pair  
XX (P) of unglycosylated protein chains disulfide bonded to produce dimeric  
XX species having a conformation so that (P) is capable of inducing  
XX endochondral bone formation in mammal when disposed in the matrix and  
XX accessible to the cells. Also included are substantially a pure mammalian  
XX osteogenic protein (comprising a pair of unglycosylated polypeptide  
XX chains and capable of inducing endochondral bone formation in association  
XX with a matrix when implanted in a mammal, where the osteogenic protein  
XX comprises peptides derived from human or mouse OP1), a DNA sequence  
XX encoding a protein comprising the DNA, a host cell harbouring and capable  
XX of expressing (DNA or vector), an osteogenic protein as defined above  
XX expressed from recombinant DNA in a host cell, a polypeptide chain useful  
XX as a subunit of a dimeric osteogenic protein and an antibody (Ab) capable  
XX of binding specifically to an epitope on the osteogenic proteins. The  
XX osteogenic device is useful for inducing local cartilage and bone  
XX formation, for endochondral bone formation in a mammal, for inducing  
XX cartilage or endochondral bone formation in a mammal, or for inducing  
XX endochondral bone formation in a non-union fracture in a mammal. The  
XX osteogenic device is useful for cartilage repair in a mammal, in  
XX periodontal or dental reconstructive procedures, or in endochondral bone  
XX reconstructive procedures. The antibody is useful for selectively  
XX extracting osteogenic protein from a mixture of molecules. The host cell  
XX is useful for producing a protein by recombinant gene expression. The  
XX osteogenic proteins are useful to raise monoclonal anti polyclonal  
XX antibodies capable of specifically binding to an epitope of the  
XX osteogenic protein. The present sequence represents a human osteogenic  
XX protein as a fusion protein with an E. coli leader sequence for  
XX heterologous expression. Note: The claims refer to regions of mouse and  
XX human osteogenic proteins which are functional in the osteogenic device,  
XX however the authors refer to a DNA SEQ ID number where they really mean  
XX to refer to a protein.  
XX  
SQ Sequence 408 AA;  
XX  
XX Query Match 100.0%; Score 111; DB 8; Length 408;  
XX Best Local Similarity 100.0%; Pred. No. 1.7e-06;  
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
XX  
QY 1 INPETHKPCCAPTQNLNAIS 20  
XX |||||  
Db 363 INPETHKPCCAPTQNLNAIS 382

ID ADM80499 standard; protein; 408 AA.  
XX  
XX ADM80499;  
XX  
XX 03-JUN-2004 (first entry)  
XX  
XX  
XX Human osteogenic protein, OP1D.  
XX  
XX human; osteogenic protein; OP1D; biocompatible matrix;  
XX endochondral bone formation; non-union fracture; cartilage formation;  
XX periodontal reconstructive procedure; dental reconstructive procedure;  
XX cartilage repair.  
XX  
XX Homo sapiens.  
XX  
XX US200324396-A1.  
XX  
XX 04-DEC-2003.  
XX  
XX 17-DEC-2002; 2002US-00321799.  
XX  
XX 08-APR-1988; 88US-00179406.  
XX 15-AUG-1988; 88US-00232630.  
XX 28-JAN-1992; 92US-00827052.  
XX 21-FEB-1992; 92US-00841646.  
XX 01-NOV-1993; 93US-00147023.  
XX 24-MAY-1995; 95US-00449699.  
XX 04-SEP-1998; 98US-00148925.  
XX  
XX (STYC) STRYKER CORP.  
XX  
XX Opperman H, Ozkaynak E, Kuberasampath T, Rueger DC, Pang RHL;  
XX WPI; 2004-167144/16.  
XX N-PSDB; ADM80498.  
XX  
XX Osteogenic device for implantation in mammal comprising osteogenic  
XX protein dispersed within biocompatible matrix, osteogenic protein  
XX comprising pair of unglycosylated protein chains, inducing endochondral  
XX bone formation.  
XX  
XX Disclosure; SEQ ID NO 15; 136pp; English.  
XX  
XX The invention relates to an osteogenic device for implantation in mammal,  
XX comprising osteogenic protein dispersed within biocompatible matrix  
XX defining pores, differentiation, and proliferation of migratory  
XX progenitor cells from body of mammal, improvement where osteogenic  
XX protein comprises pair of unglycosylated protein chains disulfide bonded  
XX to produce dimeric species capable of inducing endochondral bone  
XX formation. The device is useful for inducing endochondral bone  
XX formation in a non-union fracture in a mammal, for inducing cartilage or  
XX endochondral bone formation in a mammal, for use in periodontal or dental  
XX reconstructive procedures, for use in cartilage repair in a mammal, for  
XX use in endochondral bone reconstructive procedures. The device is useful  
XX for inducing cartilage or endochondral bone formation in a mammal  
XX comprising the step of implanting the mammal at a locus accessible to  
XX migratory progenitor cells. The device is useful for inducing local  
XX cartilage bone formation and endochondral bone formation in a non-union  
XX fracture in a mammal. The antibody capable of binding specifically to the  
XX osteogenic protein is useful for selectively extracting osteogenic  
XX protein from a mixture of molecules. The present sequence represents the  
XX amino acid sequence of the human osteogenic protein, OP1D.  
XX  
SQ Sequence 408 AA;  
XX  
XX Query Match 100.0%; Score 111; DB 8; Length 408;  
XX Best Local Similarity 100.0%; Pred. No. 1.7e-06;  
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
XX  
QY 1 INPETHKPCCAPTQNLNAIS 20  
XX |||||  
Db 363 INPETHKPCCAPTQNLNAIS 382

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XX RESULT 101
XX AAR07335
XX ID AAR07335 standard; protein; 431 AA.
XX
XX AAR07335;
XX
XX DT 25-MAR-2003 (revised)
XX DT 30-JAN-1991 (first entry)
XX
XX DE Human Bone Morphogenesis Protein-7.
XX
XX KW human bone morphogenic protein-7; wound healing; tissue repair;
XX cartilage formation.
XX
XX OS Homo sapiens.
XX
XX FH Key Location/Qualifiers
XX FT Cleavage-site 299..300
XX FT Protein 301..431
XX FT /label= mature BMP-7
XX
XX W09011366-A.
XX
XX PD 04-OCT-1990.
XX
XX PF 27-MAR-1990; 90WO-US001630.
XX
XX PR 28-MAR-1989; 89US-00329610.
XX PR 04-MAY-1989; 89US-00347559.
XX PR 23-JUN-1989; 89US-00370544.
XX PR 23-JUN-1989; 89US-00370547.
XX PR 23-JUN-1989; 89US-00370549.
XX PR 15-NOV-1989; 89US-00437409.
XX PR 17-NOV-1989; 89US-00438919.
XX PR 07-MAR-1990; 90US-00490033.
XX
XX PA (GENY ) GENETICS INST INC.
XX
XX PI Wang EA, Wozney JM, Celeste AJ;
XX
XX DR WPI; 1990-320266/42.
XX
XX PT New bone morphogenic proteins, BMP-5, -6 and -7 - used for stimulating,
XX PT promoting and inducing bone and/or cartilage formation, wound healing and
XX PT tissue repair.
XX PT
XX PS Example; Page 65; 96pp; English.
XX
XX CC The positive clone PBH7-9 was identified from a human osteosarcoma cDNA
XX CC library and its DNA insert was sequenced. It was found to contain the BMP
XX CC -7 coding sequence. Mature active BMP-7 is expected to comprise a
XX CC homodimer whose subunits are truncated versions of the BMP-7
XX CC proprotein. (See features) See also AA006166-Q06173, AA006187, AA006189-
XX CC Q06192. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-
XX CC 2003 to correct PA field.)
XX
XX SQ Sequence 431 AA;
XX
XX Query Match 100.0%; Score 111; DB 2; Length 431;
XX Best Local Similarity 100.0%; Pred. No. 1.8e-06;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0.
XX
XX 1 INPETHPPCCAPITQNAIS 20
XX ||||||||||||||||
XX Db 386 INPETHPPCCAPITQNAIS 405
XX
XX RESULT 102
XX AAR12106
XX ID AAR12106 standard; protein; 431 AA.
XX
XX AAR12106;
XX

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[illegible]

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RESULT 103
AAR23833
ID AAR23833 standard; protein; 431 AA.
XX
XX AAR23833;
AC
XX 25-MAR-2003 (revised)
DT 09-NOV-1992 (first entry)
XX
XX Human osteogenic protein hOP1-PP.
DE
XX Prepro protein; osteogenesis; human hippocampus; OP1-18.
XX
XX Homo sapiens.
OS
XX
XX Key Location/Qualifiers
FH 293..431
FT /label= OP1-18
FT /note= "mature protein"
FT 330..431
FT /label= OP7
FT /note= "Conserved seven cysteine skeleton"
FT 335..431
FT /label= OPS
FT /note= "conserved six cysteine skeleton"
XX
XX W09207004-A1.
XX
XX 30-APR-1992.
XX
XX 18-OCT-1991; 91WO-US007654.
XX
XX 18-OCT-1990; 90US-00600024.
XX
XX (CREA-) CREATIVE BIOMOLECULES INC.
XX
XX Ozkaynak E, Oppermann H, Kuberasampath T, Rueger DC;
PI
XX WPI: 1992-167101/20.
DR
XX N-PSDB; AAQ24518.
XX
XX Osteogenic polypeptides capable of inducing endochondral bone formation -
PT useful for bone and cartilage repair, treatment of osteoarthritis and
PT correction of skeletal and dental abnormalities.
XX
XX Disclosure; Page 39-41; 54pp; English.
PS
XX The human OP1 gene encodes an immature translation product which is
CC processed to a mature sequence of 139 amino acids ("OP1-18"). The mature
CC hOP1 protein shows significant sequence homology (i.e. 98%) with the
CC mature murine OP1 ("mOP1"). The sequences differ at only three positions.
CC The prepro sequences share substantially less homology. See AAR23832 for
CC murine OP1. (Updated on 25-MAR-2003 to correct PN field.)
XX
XX Sequence 431 AA;
SQ
Query Match 100.0%; Score 111; DB 2; Length 431;
Best Local Similarity 100.0%; Pred. No. 1.8e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 INPETHKPCCAPTOLNAIS 20
DB 386 INPETHKPCCAPTOLNAIS 405

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DT 26-FEB-1993 (first entry)
XX
XX Human osteogenic protein hOP1.
DE
XX Morphogen; morphogenic protein.
XX
XX Homo sapiens.
CS
XX W09215323-A1.
PN
XX 17-SEP-1992.
PD
XX 11-MAR-1992; 92WO-US001968.
PF
XX 11-MAR-1991; 91US-00667274.
PR
XX (CREA-) CREATIVE BIOMOLECULES INC.
XX
XX Cohen CM, Kuberasampath T, Pang RHL, Oppermann H, Rueger DC;
PI
XX WPI: 1992-331475/40.
DR
XX N-PSDB; AAQ28735.
XX
XX Compens. for increasing progenitor cell population - contain a morphogen
PT to induce proliferation, useful for inhibiting neoplastic growth,
PT inducing tissue repair and in diagnosis of tissue dysfunction.
XX
XX Disclosure; Page 93-95; 132pp; English.
PS
XX Mature hOP1 is one of the preferred known morphogens which can be used in
XX the manufacture of pharmaceuticals for inducing non-chondrogenic
XX mammalian tissue growth, progenitor cell proliferation and hepatic tissue
XX growth and for maintaining the phenotypic expression of differentiated
XX cells in a mammal. Morphogens sharing at least 70% homology with hOP1 or
XX at least 65% identity with residues 43-139 of hOP1 are included. (Updated
XX on 25-MAR-2003 to correct PN field.)
XX
XX Sequence 431 AA;
SQ
Query Match 100.0%; Score 111; DB 2; Length 431;
Best Local Similarity 100.0%; Pred. No. 1.8e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 INPETHKPCCAPTOLNAIS 20
DB 386 INPETHKPCCAPTOLNAIS 405

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RESULT 104
AAR27289
ID AAR27289 standard; protein; 431 AA.
XX
XX AAR27289;
AC
XX 25-MAR-2003 (revised)
DT

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RESULT 105
AAR44746
ID AAR44746 standard; protein; 431 AA.
XX
XX AAR44746;
AC
XX 25-MAR-2003 (revised)
DT 01-JUN-2002 (revised)
DT 06-JUN-1994 (first entry)
XX
XX Osteogenic protein OP1.
DE
XX Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;
XX vascularisation; mineralisation; differentiation.
XX
XX Homo sapiens.
CS
XX US5266683-A.
PN
XX 30-NOV-1993.
PD
XX 21-FEB-1992; 92US-00841646.
PF
XX 08-APR-1988; 88US-00179406.
PR 15-AUG-1988; 88US-00232630.

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PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621888.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 XX  
 PA (STYC) STRYKER CORP.  
 XX  
 PI Kuberampath T, Ozkaynak E, Rueger DC, Pang RHL, Oppermann H;  
 XX  
 DR WPI; 1993-395405/49.  
 DR N-PSDB; AAQ53141.  
 XX  
 PT New pure mammalian osteogenic proteins - induce cartilage and  
 PT endochondral bone formation when in association with a matrix.  
 XX  
 PS Claim 14; Col 69-72; 128pp; English.  
 XX  
 CC The osteogenic protein when in association with a matrix can induce at  
 CC the locus of an implant the full development cascade of endochondral bone  
 CC formation including vascularisation, mineralisation and bone marrow  
 CC differentiation. The osteogenic protein can also be used to repair both  
 CC bone and cartilage in the treatment of osteoarthritis. This is the pre-  
 CC pro form of the protein. (Updated on 01-JUL-2002 to add missing PA  
 CC field.) (Updated on 25-MAR-2003 to correct PF field.) (Updated on 25-MAR-  
 CC 2003 to correct PR field.)  
 XX  
 SQ Sequence 431 AA;  
 XX  
 Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 OY 1 INPETHKPCCAPTQLNMAIS 20  
 DB 386 INPETHKPCCAPTQLNMAIS 405  
 XX  
 RESULT 106  
 AAR33931  
 ID AAR33931 standard; protein; 431 AA.  
 XX  
 AC AAR33931;  
 XX  
 DT 25-MAR-2003 (revised)  
 DT 13-JUL-1993 (first entry)  
 XX  
 DE Morphogen hOP1 full length sequence.  
 XX  
 KM Morphogen; homodimer; stimulate; proliferation; progenitor cell;  
 KM differentiation; growth; redifferentiation; transformation; human; mouse;  
 KM Drosophila; Xenopus; committed cells; hippocampus.  
 XX  
 OS Homo sapiens.  
 XX  
 PN MO3305172-A1.  
 XX  
 PD 18-MAR-1993.  
 XX  
 PF 28-AUG-1992; 92WO-US007359.  
 XX  
 PR 30-AUG-1991; 91US-00752861.  
 XX  
 PI (CREA-) CREATIVE BIOMOLECULES INC.  
 XX

XX  
 PI Smart JE, Oppermann H, Ozkaynak E, Kuberampath T, Rueger DC;  
 PI Pang RHL, Cohen CN;  
 XX  
 DR WPI; 1993-100893/12.  
 DR N-PSDB; AAQ38857.  
 XX  
 PT Screening cpds. to determine ability to modulate effective concn. of a  
 PT morphogen - by assaying test tissue type cells for parameter indicative  
 PT of a prodn. level change of morphogen.  
 XX  
 PS Disclosure; Page 85-87; 132pp; English.  
 XX  
 CC This sequence represents the human morphogen hOP1, isolated from the  
 CC hippocampus. This morphogen is inactive when reduced but is active as an  
 CC oxidised homodimer and when oxidised in combination with other  
 CC morphogens. These morphogens are capable of stimulating proliferation of  
 CC progenitor cell, stimulating the differentiation of progenitor cells,  
 CC stimulating the proliferation of differentiated cells and supporting the  
 CC growth and maintenance of differentiated cells, including the  
 CC redifferentiation of transformed cells. These morphogens may also be  
 CC capable of inducing redifferentiation of committed cells under  
 CC appropriate environmental conditions. (Updated on 25-MAR-2003 to correct  
 CC PF field.)  
 XX  
 SQ Sequence 431 AA;  
 XX  
 Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 OY 1 INPETHKPCCAPTQLNMAIS 20  
 DB 386 INPETHKPCCAPTQLNMAIS 405  
 XX  
 RESULT 107  
 AAR33408  
 ID AAR33408 standard; protein; 431 AA.  
 XX  
 AC AAR33408;  
 XX  
 DT 25-MAR-2003 (revised)  
 DT 09-JAN-2003 (revised)  
 DT 15-JUL-1993 (first entry)  
 XX  
 DE Human OP-1-PP.  
 XX  
 KM morphogenic; osteogenic protein; developmental cascade; hOP-1;  
 KM inflammation; anti-inflammatory; Transforming Growth Factor;  
 KM TGF-beta super-family; hippocampus.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT Protein 293..431  
 FT /note="contains conserved 7 cysteine skeleton"  
 XX  
 PN MO3304692-A1.  
 XX  
 PD 18-MAR-1993.  
 XX  
 PF 28-AUG-1992; 92WO-US007358.  
 XX  
 PR 30-AUG-1991; 91US-00752764.  
 PR 30-AUG-1991; 91US-00752861.  
 PR 30-AUG-1991; 91US-00753059.  
 XX  
 PI (CREA-) CREATIVE BIOMOLECULES INC.  
 XX  
 PI Kuberampath T, Pang RHL, Oppermann H, Rueger DC, Cohen CN;  
 PI Ozkaynak E, Smart JE;  
 XX



CC bone stimulating activity. This heterodimer comprises BMP-2 or BMP-4 or a  
 CC fragment in association with a second protein or fragment, BMP-7. It may  
 CC be used in compans. for wound healing, tissue repair, and in similar  
 CC compans. which have been indicated for the use of individual BMPs.  
 CC Increased potency of the heterodimer over individual BMPs may permit  
 CC lower dosages to be administered. A heterodimeric protein which induces  
 CC cartilage and/or bone growth in circumstances where bone is not normally  
 CC formed, has applications in the healing of bone fractures and cartilage  
 CC defects in humans and other animals. The heterodimer may have  
 CC prophylactic use in closed as well as open fracture reduction and also in  
 CC the improved fixation of artificial joints. De novo bone formation  
 CC induced by an osteogenic agent contributes to the repair of congenital,  
 CC trauma induced or oncologic resection induced craniofacial defects, and  
 CC also is useful in cosmetic plastic surgery. It may be used in the  
 CC treatment of periodontal disease and in other tooth repair processes. It  
 CC may also be useful in the treatment of osteoporosis, wound healing (e.g.  
 CC burns, incisions and ulcers) and related tissue repair, and may increase  
 CC neuronal survival and be useful in the transplantation and treatment of  
 CC conditions exhibiting a decrease in neuronal survival. It may be combined  
 CC with other agents beneficial to the bone and/or cartilage defect, wound  
 CC or tissue in question, e.g. EGF, PDGF, TGF-alpha, TGF-beta and insulin-  
 CC like growth factor (Updated on 25-MAR-2003 to correct PN field.)

XX Sequence 431 AA;

Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNLAIS 20  
 DB 386 INPETHKPCCAPTOLNLAIS 405

RESULT 110

AA4935  
 ID AAR54935 standard; protein; 431 AA.

AC AAR54935;

DT 25-MAR-2003 (revised)

DT 15-OCT-1994 (first entry)

XX Osteogenic protein hOP1-PP.

XX Morphogenic protein; hOP-1-PP; OP-1; hOP1; hOP-1; tissue morphogenesis;

KW osteogenic protein.

XX Homo sapiens.

XX WO9410203-A2.

XX 11-MAY-1994.

XX 02-NOV-1993; 93WO-US010520.

XX 03-NOV-1992; 92US-00971091.

XX 04-MAR-1993; 93US-00029335.

XX 31-MAR-1993; 93US-00040510.

XX (CREA-) CREATIVE BIOMOLECULES INC.

XX Oppermann H, Okaynak E, Kuberassampach T, Rueger DC, Pang RHL,

XX N-PSDB; AAQ65391.

XX A morphogenetically active protein hOP-3 - for inducing tissue

XX morphogenesis in mammals.

XX Disclosure; Page 119-121; 164pp; English.

CC A novel mouse morphogenic protein, OP3, has the sequence given in.  
 CC AAR54935, and is encoded by cDNA of sequence AAQ65390. cDNA and protein  
 CC sequences were also provided for human osteogenic protein OP1 (AAQ65391),  
 CC AAR54935), mouse OP1 (AAQ65392, AAR54936), human OP2 (AAQ65393, AAR54937)  
 CC and mouse OP2 (AAQ65394, AAR54938), as well as the genomic DNA sequence  
 CC of human OP2 (AAQ65395). Generic sequences given in AAR54939-40  
 CC accommodate homologies between OP1, OP2, OP3 and other morphogen protein  
 CC family members. (Updated on 25-MAR-2003 to correct PN field.)

XX Sequence 431 AA;

Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNLAIS 20  
 DB 386 INPETHKPCCAPTOLNLAIS 405

RESULT 111

AA46731  
 ID AAR46731 standard; protein; 431 AA.

AC AAR46731;

DT 25-MAR-2003 (revised)

DT 25-AUG-1994 (first entry)

XX Human osteogenic pro-protein hOP1.

XX human osteogenic protein; hOP1; morphogen; infant food formulation;

KW tissue morphogenesis; tissue development; bone growth;

XX morphogen-enriched nutritional product.

XX Homo sapiens.

XX WO9403075-A2.

XX 17-FEB-1994.

XX 29-JUL-1993; 93WO-US007190.

XX 31-JUL-1992; 92US-00923780.

XX 16-SEP-1992; 92US-00946235.

XX 04-MAR-1993; 93US-00029335.

XX 31-MAR-1993; 93US-00040510.

XX (CREA-) CREATIVE BIOMOLECULES INC.

XX Kuberassampach T, Cohen CM, Rueger DC, Oppermann H, Pang RHL,

XX N-PSDB; AAQ57916.

XX Morphogen enriched dietary compositions and infant formula - capable of

XX enhancing tissue morphogenesis; development and viability, e.g. in

XX infant, aged individuals and metabolic disorders, e.g. anorexia nervosa,

XX etc.

XX Claim 32; Page 110-112; 160pp; English.

XX This sequence is the pro form of human osteogenic protein hOP1. The

XX mature hOP1 and proteins having at least 70% homology with it are

XX preferred morphogens for inclusion in new morphogen-enriched nutritional

XX formulations. The formulations are dietary compositions suitable for

XX people at risk for tissue damage due to protein energy malnutrition or to

XX altered metabolism function and infant formulations to enhance tissue

XX development in an infant or juvenile. (Updated on 25-MAR-2003 to correct

XX PN field.)

XX Sequence 431 AA;

Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
 DB 386 INPETHKPCCAPTOLNAIS 405

## RESULT 112

AARS0198  
 ID AARS0198 standard; protein; 431 AA.

AC AARS0198;

DT 25-MAR-2003 (revised)

DT 11-OCT-1994 (first entry)

XX Human OP-1.

XX OP-1; OP-2; CBMP2; Vgl(fx); Vgr(fx); DPP(fx); GDF-1(fx); 60A(fx);  
 KW BMP5(fx); BMP6(fx); osteogenic protein; morphogen;  
 KW morphogenic protein; gastrointestinal tract; luminal lining;  
 KW epithelial cell; proliferation; ulcer, lesion; inflammation;  
 KW regeneration; tissue.

XX Homo sapiens.

PN W09406420-A2.

XX 31-MAR-1994.

XX 15-SEP-1993; 93WO-US008885.

XX 15-SEP-1992; 92US-00945286.

XX 04-MAR-1993; 93US-00029335.

XX 31-MAR-1993; 93US-00040510.

XX (CREA-) CREATIVE BIOMOLECULES INC.

XX Cohen CM, Charette MF, Kuberasampath T, Rueger DC, Oppermann H;  
 PI Pang RHL, Ozkaynak E, Smart JE;

XX WPI: 1994-118121/14.

XX N-PSDB; AAQ45116.

XX Maintaining integrity of gastrointestinal lining using a morphogen  
 PT (stimulant) - for treating or preventing ulceration, also to inhibit  
 PT endothelial cell proliferation and reduce side effects of cancer therapy.

XX Claim 35-36; Page 102-104; 15pp; English.

XX Morphogens comprising an amino acid sequence sharing at least 70%  
 CC homology with OP-1, OP-2, CBMP2, BMP3(fx), Vgl(fx), Vgr(fx), DPP(fx), GDF  
 CC -1(fx), 60A(fx) and at least 80% homology with BMP5(fx) and BMP6(fx) are  
 CC useful for maintaining the integrity of the gastrointestinal tract  
 CC luminal lining in a mammal, including (1) limiting epithelial cell  
 CC proliferation, (2) inhibiting ulcerative lesion formation, (3) inhibiting  
 CC inflammation normally associated with ulcerative diseases, and/or (4)  
 CC stimulating the repair of ulcerative lesions and the regeneration of the  
 CC luminal tissue. Morphogens having at least 60% homology with residues 43-  
 CC 139 of mature hOP1 are included (claim 37-39). (Updated on 25-MAR-2003 to  
 CC correct PN field.)

XX Sequence 431 AA;

Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
 DB 386 INPETHKPCCAPTOLNAIS 405

## RESULT 113

AARS1644  
 ID AARS1644 standard; protein; 431 AA.

AC AARS1644;

DT 25-MAR-2003 (revised)

DT 01-JUL-2002 (revised)

DT 08-JUN-1995 (first entry)

XX hOP1 human osteogenic protein 1.

XX hOP1; human osteogenic protein; osteoarthritis; orthogenesis;  
 KW non-union fracture repair; allograft repair;  
 KW cartilage and endochondral bone formation;  
 KW periodontal, dental and craniofacial reconstruction.

XX Homo sapiens.

PN US5354557-A.

PD 11-OCT-1994.

PF 18-DEC-1992; 92US-00993387.

XX 08-APR-1988; 88US-00179406.

XX 15-AUG-1988; 88US-00232630.

XX 23-FEB-1989; 89US-00315342.

XX 17-OCT-1989; 89US-00422613.

XX 17-OCT-1989; 89US-00422699.

XX 22-FEB-1990; 90US-00483913.

XX 20-AUG-1990; 90US-00569920.

XX 07-SEP-1990; 90US-00579865.

XX 18-OCT-1990; 90US-00595943.

XX 18-OCT-1990; 90US-00600024.

XX 21-NOV-1990; 90US-00616374.

XX 04-DEC-1990; 90US-00621849.

XX 22-FEB-1991; 91US-00660162.

XX 20-DEC-1991; 91US-00810560.

XX 28-JAN-1992; 92US-00827052.

XX 21-FEB-1992; 92US-00841646.

XX (STYC) STRYKER CORP.

XX Rueger DC, Kuberasampath T, Ozkaynak E, Oppermann H;

XX WPI: 1994-324521/40.

XX N-PSDB; AAQ72703.

XX Implantable device for inducing osteogenesis - comprises porous matrix  
 PT congy. non-glycosylated dimeric, disulphide linked osteogenic protein.  
 XX Claim 15; Col 63-68; 128pp; English.  
 XX AAG72703 encodes AARS1644 human osteogenic protein 1 (hOP1), fragments of  
 CC this protein consisting of residues 335-431, 318-431, 293-431, 300-431,  
 CC 313-431, 315-431 and 316-431; are unglycosylated osteogenic polypeptides.  
 CC Any two of these polypeptides can be disulphide bonded to form a dimer,  
 CC which forms an essential component of an osteogenic protein. This protein  
 CC is dispersed in a biodegradable matrix which can be implanted into a  
 CC mammalian bone marrow cavity, here it can induce local cartilage, bone  
 CC and endochondral bone formation; and it can also accelerate allograft  
 CC repair. This implant has the advantage of inducing all stages of bone  
 CC formation and of having a higher specific activity than other known  
 CC bioinert materials. The implant can be used to repair non-union  
 CC fractures and cartilage, treat osteoarthritis, and aid in periodontal,  
 CC dental or craniofacial reconstruction. (Updated on 01-JUL-2002 to add  
 CC missing PA field.) (Updated on 25-MAR-2003 to correct PF field.) (Updated  
 CC on 25-MAR-2003 to correct PR field.)



SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
 DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 114  
 ID AAR60577 standard; protein; 431 AA.

AC AAR60577;  
 DT 25-MAR-2003 (revised)  
 DT 30-MAR-1995 (first entry)

DE Osteogenic protein OP1.  
 KW Osteogenic protein.

OS Homo sapiens.

FT Key location/Qualifiers  
 FT Cleavage-site 289..292  
 FT /note="proteolytic cleavage site"  
 FT Protein 293..431  
 FT /note="mature sequence"

PN WO9420539-A1.  
 XX 15-SEP-1994.

XX 04-MAR-1994; 94WO-US002335.

XX 04-MAR-1993; 93US-00027070.

XX (CREA-) CREATIVE BIOMOLECULES INC.

XX Rueger DC, Jones WK, Tucker RF, Oppermann H, Ozkaynak E,  
 PI Sampath KT;

XX WPI; 1994-302971/37.  
 DR N-PSDB; AAQ71425.

PT Binding partners, esp. antibodies, specific for different forms of  
 PT osteogenic protein - for differentiating between mature and soluble  
 PT complexed forms of the protein in culture media or serum.

XX Disclosure; Page 46-47; 70pp; English.

CC The osteogenic protein is produced recombinantly in mammalian cell  
 CC cultures, and may be provided to a site for bone induction in a mammal  
 CC with a suitable matrix to allow infiltration, proliferation and  
 CC correct PN field.)  
 CC correct PN field.)

XX Sequence 431 AA;

Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
 DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 115  
 AAR47290

ID AAR47290 standard; protein; 431 AA.

AC AAR47290;  
 DT 25-MAR-2003 (revised)  
 DT 02-SEP-1994 (first entry)

DE hOP1.

XX Human; hippocampus; osteogenic protein; OP-1; hOP-1; mature; injury;  
 KW survival; neural cell; morphogen; chemical; mechanical; neuropathy;  
 KW transected nerves; demyelinated cell; toxin; ethanol; Parkinsons;  
 KW Alzheimers; Huntingtons chorea; amyotrophic lateral sclerosis;  
 KW multiple sclerosis; neoplastic lesion; central nervous system; CNS;  
 KW retinoblastoma; glial cell neoplasm; redifferentiation; neuroblastoma;  
 KW peripheral nervous system; neurite; outgrowth; cell aggregation;  
 KW cell adhesion; axonal; nerve regeneration; vascularisation;  
 KW myelin sheath.

OS Homo sapiens.

PN WO9403200-A1.

XX 17-FEB-1994.

XX 29-JUL-1993; 93WO-US007231.

XX 31-JUL-1993; 92US-00922813.

XX 04-MAR-1993; 93US-00029335.

XX 31-MAR-1993; 93US-00040510.

XX (CREA-) CREATIVE BIOMOLECULES INC.

XX Rueger DC, Kuberampath T, Oppermann H, Ozkaynak E, Pang RHL,  
 PI Cohen CM;

XX WPI; 1994-065399/08.

XX N-PSDB; AAQ56231.

XX Claim 23; Page 122-124; 176pp; English.

PT Using morphogens to improve survival of neural cells - also stimulating  
 PT re-differentiation in transformed cells and prodn. of adhesion molecules,  
 PT for treating traumatic injury, neuropathy and nerve cell cancers, etc.

CC This sequence represents the human hippocampus derived protein,  
 CC osteogenic protein, hOP-1. The mature OP-1 protein was used in the method  
 CC as this, can be used to treat (protect) cells which have suffered  
 CC chemical or mechanical injury, eg. transected nerves; demyelinated cells;  
 CC cells exposed to toxins such as ethanol, and cells at risk because of  
 CC neuropathies (such as Parkinsons and Alzheimers diseases; Huntingtons  
 CC chorea; amyotrophic lateral sclerosis or multiple sclerosis). At  
 CC risk cells can be in the central or peripheral nervous systems. When used  
 CC to induce redifferentiation, morphogens such as this, are used to treat  
 CC neuroblastoma and then induce formation of neurite outgrowth, cell  
 CC aggregation and/or cell adhesion. These proteins stimulate complete  
 CC axonal nerve regeneration, including vascularisation and reformation of  
 CC the myelin sheath. Nerves can be regenerated over long distances, eg.  
 CC greater than 10mm. (Updated on 25-MAR-2003 to correct PN field.) (Updated  
 CC on 25-MAR-2003 to correct PF field.) (Updated on 25-MAR-2003 to correct  
 CC PI field.)

QY 1 INPETHKPCCAPTOLNAIS 20  
 DB 386 INPETHKPCCAPTOLNAIS 405



DT 15-AUG-1994 (first entry)  
 XX  
 DE hOPL.  
 XX  
 KW Human; hippocampus; osteogenic protein; OP-1; subunit; dimer;  
 KW morphogenic activity; cysteine; morphogen; family; pro-region; complex;  
 KW soluble; aqueous solvent; therapeutic composition; symptom-alleviating;  
 KW co-factor; antibody; diagnosis; assay; quantitate; mature.  
 XX  
 OS Homo sapiens.  
 XX  
 XX Key Location/Qualifiers  
 FH Peptide 30..292  
 FT /note="Pref. Pro-region, Claim 8"  
 FT Peptide 30..48  
 FT /note="Pref. Pro-region, Claim 8"  
 FT Peptide 48..292  
 FT /note="Pref. Pro-region, Claim 8"  
 XX  
 XX WO9403600-A1.  
 XX  
 PD 17-FEB-1994.  
 XX  
 XX 29-JUL-1993; 93WO-US007189.  
 XX  
 XX 31-JUL-1992; 92US-00923780.  
 PR 04-MAR-1993; 93US-00029335.  
 PR 31-MAR-1993; 93US-00040510.  
 XX  
 XX (CREA-) CREATIVE BIOMOLECULES INC.  
 PA Jones WK, Tucker RF, Rueger DC, Oppermann H, Ozkaynak E,  
 PI Kuberampath T;  
 PI WPI; 1994-065689/08.  
 DR N-PSDB; AAO56198.  
 XX  
 PT Morphogenic protein soluble complex - for regeneration of tissue in  
 PT mammals and diagnosing tissue disorders.  
 XX  
 PS Claim 3; Page 60-63; 120pp; English.  
 XX  
 CC This sequence represents the human hippocampus derived protein,  
 CC osteogenic protein, O-P1. The mature OP-1 protein was used as at least  
 CC one subunit in the dimeric protein of the invention. This dimeric protein  
 CC comprises a pair of protein subunits which are associated to give a  
 CC structure with morphogenic activity. Each subunit comprises more than 100  
 CC amino acids having a pattern of cysteine residues characteristic of the  
 CC morphogen family. Each subunit comprises a mature form of a subunit of a  
 CC member of the morphogen family, non-covalently complexed with a peptide  
 CC comprising a pro-region of a morphogenic family member, to form a complex  
 CC more soluble in aqueous solvents than the uncomplexed subunits. The  
 CC dimeric protein is useful in a therapeutic composition, pref. also  
 CC containing a symptom-alleviating co-factor. The protein and corresponding  
 CC antibody may be used in diagnostic assays, eg. to quantitate the amount  
 CC of mature and soluble forms of morphogenic proteins produced. (Updated on  
 CC 25-MAR-2003 to correct PN field.)  
 CC  
 XX Sequence 431 AA;  
 XX  
 Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTQLNIAIS 20  
 DB 386 INPETHKPCCAPTQLNIAIS 405  
 XX  
 RESULT 119  
 AAR85211  
 ID AAR85211 standard; protein; 431 AA.  
 XX

AC AAR85211;  
 XX  
 DT 13-FEB-1996 (first entry)  
 XX  
 DE Human osteogenic protein 1.  
 XX  
 KW OPI binding receptor; osteogenic protein 1; morphogenesis; morphogen;  
 KW ALK.  
 XX  
 OS Homo sapiens.  
 XX  
 XX Key Location/Qualifiers  
 FH Region 1..292  
 FT /label= Prepro\_region  
 FT Protein 293..431  
 FT /label= Mat\_protein  
 FT Domain 330..431  
 FT /label= C-terminal\_cysteine\_domain  
 XX  
 XX WO9530003-A2.  
 XX  
 PD 09-NOV-1995.  
 XX  
 XX 28-APR-1995; 95WO-US005467.  
 XX  
 XX 29-APR-1994; 94US-00236428.  
 XX  
 XX (CREA-) CREATIVE BIOMOLECULES INC.  
 PA (LUDW-) LUDWIG INST CANCER RES.  
 PA DiJke FT, Miyazano K, Sampath KT, Heldin C,  
 PI WPI; 1995-393076/50.  
 DR N-PSDB; AAT06038.  
 DR  
 XX  
 PT Identifying osteogenic protein-1 receptor-binding analogue - useful in  
 PT the design of morphogen agonists and antagonists for therapeutic.  
 PT diagnostic and experimental purposes.  
 XX  
 PS Claim 12; Page 78-80; 95pp; English.  
 XX  
 CC cDNA encoding the human osteogenic protein 1 (OP1) is given in AAT06038.  
 CC The encoded protein (AAR85210) is used to isolate OPI binding receptors  
 CC ALK-2, ALK-3 and ALK-6 (see AAR85206, AAR85207, AAR85209, respectively)  
 XX  
 XX Sequence 431 AA;  
 XX  
 Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTQLNIAIS 20  
 DB 386 INPETHKPCCAPTQLNIAIS 405  
 XX  
 RESULT 120  
 AAM00236  
 ID AAM00236 standard; protein; 431 AA.  
 XX  
 AC AAM00236;  
 XX  
 DT 21-NOV-1996 (first entry)  
 XX  
 DE Human osteogenic protein OP-1.  
 XX  
 KW Morphogen; osteogenic protein; dentine; tooth decay; caries;  
 KW morphogenesis; odontoblast; OP-1.  
 XX  
 OS Homo sapiens.  
 XX  
 XX Key Location/Qualifiers  
 FH Peptide 1..29  
 FT

FT	Region	/label= Sig_peptide
FT	30..292	
FT	/label= Pro_region	
FT	293..431	
FT	/label= Mat_protein	
FT	330..431	
FT	/label= 7-Cys_C-terminal_domain	
XX		
XX	WO9626737-A1.	
XX		
XX	06-SEP-1996.	
XX		
XX	14-FEB-1996;	96WO-US002169.
XX		
XX	01-MAR-1995;	95US-00396930.
XX		
XX	(CREA-) CREATIVE BIOMOLECULES INC.	
XX		
XX	Charette MF, Rutherford RB;	
XX		
XX	WPI: 1996-412583/41.	
XX		
XX	N-PSDB; AATJ3441.	
XX		
XX	Use of morphogen(s), e.g. osteogenic proteins, on dentin surfaces - for	
XX	PT inducing dentine morphogenesis, desensitising teeth or sealing tooth	
XX	PT cavities.	
XX		
XX	Disclosure; Page 50-52; 106pp; English.	
XX		
XX	Human hippocampus full-length osteogenic protein OP-1 (AAW00236) includes	
XX	CC a pro-sequence and the morphogenetically active mature protein sequence	
XX	CC (see also AAW00221) that includes a 7-Cys C-terminal domain. OP-1 can be	
XX	CC expressed from intact or truncated cDNA (AATJ3441) in prokaryotic or	
XX	CC eukaryotic host cells. Mature OP-1 and other morphogens (see also	
XX	CC AAW00222-35) are used to induce dentine morphogenesis, to seal dental	
XX	CC cavities and to desensitize teeth to pressure and/or temp	
XX		
XX	Sequence 431 AA;	
XX		
XX	Query Match	100.0%; Score 111; DB 2; Length 431;
XX	Best Local Similarity	100.0%; Pred. No. 1.8e-06;
XX	Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0	
XX		
XX	1 INPETHPKPCAPTQINLAIS 20	
XX		
XX	DB 386 INPETHPKPCAPTQINLAIS 405	
XX		
XX	RESULT 121	
XX	AAR87537	
XX	ID AAR87537 standard; protein; 431 AA.	
XX		
XX	AAR87537;	
XX		
XX	15-OCT-1995 (first entry)	
XX		
XX	Human osteogenic protein OP-1.	
XX		
XX	Osteogenic protein; OP-1; cartilage; bone; skeleton; joint;	
XX	KW articular cartilage; replacement body part.	
XX		
XX	Homo sapiens.	
XX		
XX	WO9533502-A1.	
XX		
XX	14-DEC-1995.	
XX		
XX	02-JUN-1995;	95WO-US006724.
XX		
XX	03-JUN-1994;	94US-00253398.
XX		
XX	(CREA-) CREATIVE BIOMOLECULES INC.	
XX		

PI	Khouri RK, Sampath KT, Rueger DC;
XX	
DR	WPI: 1996-039987/04.
DR	N-PSDB; AAT06771.
XX	
PT	Device for in-vivo production of autogenous replacement body parts -
PT	comprises matrix coated with osteogenic protein, for infiltration of
PT	cells, partic. for replacement or repair of cartilage in skeletal joints.
PS	Disclosure; Page 34-36; 51pp; English.
XX	
CC	This is osteogenic protein OP-1 which may be on the surface of a
CC	biocompatible, biodegradable matrix that allows attachment of
CC	infiltrating cells and comprises residues specific for various tissue
CC	types. This device is used for the in vivo replacement of articular
CC	cartilage or non-mineralised (especially avascular) tissue in skeletal
CC	joints
XX	
SQ	Sequence 431 AA;
Query Match	100.0%; Score 111; DB 2; Length 431;
Best Local Similarity	100.0%; Pred. No. 1.8e-06;
Matches	20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
OY	1 INPETHKPCCAPQOLNAIS 20
Db	386 INPETHKPCCAPQOLNAIS 405
RESULT 122	
AAR85757	
ID	AAR85757 standard; protein; 431 AA.
XX	
AC	AAR85757;
XX	
DT	25-MAR-2003 (revised)
DT	19-JUN-1996 (first entry)
XX	
DE	hOP-1.
XX	
XX	Human; osteogenic protein; hOP-1; murine; mOP-1; TGF-beta superfamily;
KW	transforming growth factor-beta; dimer; antibody; epitope; hippocampus;
KW	purification; implantable osteogenic device; bone formation; craniofacial;
KW	anomaly; skeletal; dental; endochondral bone formation;
KW	non-union fracture; cartilage repair; osteoarthritis.
XX	
OS	Homo sapiens.
XX	
XX	
FH	Key
FT	Peptide
FT	Location/Qualifiers
FT	1..293
FT	/note= "Prepro-peptide"
FT	1..29
FT	/note= "hOP-1 peptide, claim 2"
FT	30..292
FT	/note= "hOP-1 peptide, claim 2"
FT	293..431
FT	/label= OP-18Ser
FT	/note= "N-terminally truncated mature hOP-1 protein
FT	species, N-terminal residue is Ser, opt. designated OP-
FT	18, claim 3"
FT	294..431
FT	/note= "Mature hOP-1"
FT	318..431
FT	/label= OP-16Val
FT	/note= "N-terminally truncated mature hOP-1 protein
FT	species, N-terminal residue is Val, claim 3"
FT	330..431
FT	/label= OP7
FT	/note= "hOP-1 protein species defining the conserved 7
FT	Cys skeleton in the active region, claim 1"
FT	335..431
FT	/label= OP8
FT	/note= "hOP-1 protein species defining the conserved 6

FT Cys skeleton in the active region (S stands for short),  
 FT claim 1"  
 XX US5468845-A.  
 XX 21-NOV-1995.  
 PD 01-NOV-1993; 93US-00147023.  
 XX 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00595543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 PA (STYCK) STRYKER CORP.  
 XX Ruedger DC, Kuberassampath T, Oppermann H, Ozkaynak E;  
 XX WPI; 1996-010159/01.  
 DR N-PSDB; AAT02597.  
 XX Antibodies with osteogenic protein binding specificity - used in  
 PT purification of osteogenic proteins, and as antigenic proteins.  
 XX  
 PS Disclosure; Col 63-68; 129pp; English.  
 XX This sequence represents the human osteogenic protein, hOP-1. hOP-1 has  
 CC homology with proteins in the TGF-beta superfamily. Fragments of the hOP-  
 CC 1 protein can be used in the production of dimeric peptides which may be  
 CC used in the generation of antibodies with binding specificities for  
 CC osteogenic proteins. The antibodies are capable of binding specifically  
 CC to an epitope of the osteogenic protein and may be used in purification  
 CC protocols. Osteogenic proteins, such as hOP-1, may be used in an  
 CC implantable osteogenic device which allows predictable bone formation to  
 CC correct acquired and congenital craniofacial and other skeletal or dental  
 CC anomalies. They may be used to induce local endochondral bone formation  
 CC in non-union fractures and in other clinical applications including  
 CC dental and periodontal applications where bone formation is required.  
 CC Other potential applications include cartilage repair, e.g. in the  
 CC treatment of osteoarthritis. The cDNA encoding this sequence was isolated  
 CC from human hippocampal tissue. (Updated on 25-MAR-2003 to correct PR  
 CC field.) (Updated on 25-MAR-2003 to correct PR field.)  
 XX  
 SQ Sequence 431 AA;  
 OY  
 DB Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 1 INPETHKPCAPQLNLAIS 20  
 386 INPETHKPCAPQLNLAIS 405  
 RESULT 123  
 AAM16365  
 ID AAM16365 standard; protein; 431 AA.  
 XX  
 AC AAM16365;  
 XX

DT 25-MAR-2003 (revised)  
 DT 26-AUG-1997 (first entry)  
 XX  
 DE Human hippocampal osteogenic protein 1.  
 XX  
 XX Human; osteogenic protein; hippocampus; soluble; ligand; antibody;  
 KW mature; non-covalent; dimeric; bone morphogenetic protein; purity;  
 KW therapeutic.  
 XX  
 OS Homo sapiens.  
 XX  
 EN US5610021-A.  
 XX 11-MAR-1997.  
 PD 04-MAR-1994; 94US-00206864.  
 PF 21-FEB-1992; 92US-00841646.  
 PR 04-MAR-1993; 93US-00027070.  
 PA (CREA-) CREATIVE BIOMOLECULES INC.  
 XX  
 XX Tucker RF, Oppermann H, Ozkaynak E, Rueger DC, Sampath KT;  
 PI Jones WK;  
 XX WPI; 1997-178399/16.  
 DR N-PSDB; AAT73207.  
 XX  
 PT Antibody specific for soluble form of osteogenic protein - for quality  
 PT control and diagnostic use.  
 XX  
 PS Disclosure; Col 19-22; 20pp; English.  
 XX This is the amino acid sequence of the human osteogenic protein 1 (OP1)  
 CC derived from hippocampal tissue. The invention relates to a novel soluble  
 CC form of this protein and of OP2 (AAM16366), and especially to ligands  
 CC binding these proteins, e.g. poly- or monoclonal antibodies. The ligands  
 CC are especially able to differentiate between the soluble and mature forms  
 CC of these proteins. The soluble forms of the proteins preferably comprises  
 CC the C-terminal 6 or 7 Cys residues (i.e. for OP1 residues 335-431 (6 Cys)  
 CC or 330-341 (7 Cys)). The soluble complex comprises a pro domain of the  
 CC protein non-covalently linked to a dimeric form of the osteogenic protein  
 CC which containing at least the soluble part of OP1 and another osteogenic  
 CC protein e.g. OP2, bone morphogenetic protein (BMP)-2, -3, -4, -5, -6 or -  
 CC 9. The ligand may be used to monitor the purity of therapeutic osteogenic  
 CC protein preparations and for diagnostic purposes. (Updated on 25-MAR-2003  
 CC to correct PR field.)  
 XX  
 SQ Sequence 431 AA;  
 OY  
 DB Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 1 INPETHKPCAPQLNLAIS 20  
 386 INPETHKPCAPQLNLAIS 405  
 RESULT 124  
 AAM40190  
 ID AAM40190 standard; protein; 431 AA.  
 XX  
 AC AAM40190;  
 XX  
 DT 08-JUN-1998 (first entry)  
 XX  
 DE Human OP-1 protein.  
 XX  
 XX Osteogenic protein; OP-1; bone morphogenetic protein; OP/BMP family;  
 KW chronic renal failure; renal therapeutic agent; disease; diabetes;  
 KW nephropathy; glomerulopathy; hypertrophy; sclerosis; nephritis; human;  
 KW dysplasia; fibrosis; glomerular filtration rate; GFR.

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XX OS Homo sapiens.
XX FH Key
XX FT Peptide
XX FT Peptide
XX FT Peptide
XX FT Protein
XX FT Protein
XX PN W09741881-A1.
XX PD 13-NOV-1997.
XX PF 06-MAY-1997; 97MO-US007816.
XX PR 06-MAY-1996; 96US-00643321.
XX PA (CREA-) CREATIVE BIOMOLECULES INC.
XX PI Sampath KT, Cohen CM;
XX DR WPI; 1997-558690/51.
XX DR N-PSDB; AAV10345.
XX PT Treatment of chronic renal failure - using an osteogenic protein/bone
XX PT morphogenetic protein renal therapeutic agent or morphogen or renal
XX PT mesenchymal progenitor cells.
XX PS Disclosure; Page 55-56; 113pp; English.
XX PS This sequence represents the human osteogenic protein, OP-1. This protein
XX CC is used in a method for the treatment of a mammal having, or at risk of,
XX CC chronic renal failure which comprises administering an osteogenic
XX CC protein/bone morphogenetic protein (OP/BMP) renal therapeutic agent or
XX CC morphogen. The method can be used for treating e.g. chronic renal
XX CC failure, end-stage renal disease, chronic diabetic nephropathy, diabetic
XX CC glomerulopathy, diabetic renal hypertrophy, hypertensive nephrosclerosis,
XX CC hypertensive glomerulosclerosis, chronic glomerulonephritis, hereditary
XX CC nephritis, renal dysplasia, or a patient afflicted with e.g. glomerular
XX CC hypertrophy, tubular hypertrophy, glomerulosclerosis, tubulointerstitial
XX CC sclerosis or renal fibrosis. Such therapeutic agents can prevent, inhibit
XX CC or delay the progressive loss of functional nephron units and the
XX CC progressive decline in glomerular filtration rate (GFR) which slowly but
XX CC inevitably leads to the need for renal replacement therapy
XX SQ Sequence 431 AA:
XX Query Match 100.0%; Score 111; DB 2; Length 431;
XX Best Local Similarity 100.0%; Pred. No. 1.8e-06;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 INPETHKPCCAPTQNLNAIS 20
DB 386 INPETHKPCCAPTQNLNAIS 405
RESULT 125
AAW36853
ID AAW36853 standard; protein; 431 AA.
XX AAW36853;
XX AC AAW36853;
XX DT 25-MAR-2003 (revised)
XX DT 10-MAR-1998 (first entry)
XX DE Full length sequence of human osteogenic protein 1 (hOP-1).
XX KW Human osteogenic protein; OP; OP-1; morphogen; morphogenic protein;
XX KW embryogenesis; organ maintenance; tissue-specific morphogenesis;
XX KW arthritis; emphysema; osteoporosis; cirrhosis.
XX

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```

OS OS Homo sapiens.
XX FH Key
XX FT Region
XX FT Region
XX FT Protein
XX FT Protein
XX FT Region
XX PN US5650276-A.
XX PD 22-JUL-1997.
XX PF 20-JUL-1994; 94US-00278729.
XX PR 11-MAR-1991; 91US-00667274.
XX PR 30-AUG-1991; 91US-00752764.
XX PR 30-AUG-1991; 91US-00752861.
XX PR 28-AUG-1992; 92US-00938021.
XX PA (CREA-) CREATIVE BIOMOLECULES INC.
XX PI Ozkaynak E, Oppermann H, Pang RH, Cohen CM, Kuberansampath T;
XX PI Rueger DC, Smart JB;
XX DR WPI; 1997-384665/35.
XX DR N-PSDB; AAT97877.
XX PT Screening for compounds which modulate morphogen expression - by
XX PT incubating in the presence of epithelial cells which contain a cellular
XX PT gene for morphogenic protein expression.
XX PS Disclosure; Col 49-52; 49pp; English.
XX PS The present sequence represents a human osteogenic protein-1 (hOP-1). hOP
XX CC -1 was first found in bone tissue, and is now known to be produced at
XX CC relatively high levels in cells derived from renal or adrenal tissue. OP-
XX CC 1 proteins are a group of morphogenically active proteins. Morphogens are
XX CC inactive when reduced, but are active as oxidised homodimers and when
XX CC oxidised with other morphogens (e.g. AAW36854-62). Comparison of the
XX CC amino acid sequences of these morphogens has identified a consensus 6-7
XX CC cysteine motif at the C-terminal. Morphogenic proteins such as OP-1 play
XX CC an important role, not only in embryogenesis, but also in tissue and
XX CC organ maintenance and repair in mammals. They induce a developmental
XX CC cascade of tissue-specific morphogenesis in a mammal. A novel method is
XX CC described for screening a candidate compound for the ability to modulate
XX CC expression of a cellular gene encoding a naturally occurring morphogenic
XX CC protein. The candidate compound is incubated with epithelial cells which
XX CC express the cellular gene, and after a period of time the epithelial
XX CC cells are assayed for the presence of or the amount of the protein
XX CC expressed by the cellular gene. A change in the level of the morphogenic
XX CC protein relative to the level in the epithelial cells in the absence of
XX CC the candidate compound is indicative of the ability of the compound to
XX CC modulate expression of the cellular gene. The method can be used to
XX CC identify compounds which can increase or decrease morphogen production or
XX CC levels. Such compounds can be used in the treatment of, e.g. arthritis,
XX CC emphysema, osteoporosis, kidney disease, lung diseases, cardiomyopathy,
XX CC and cirrhosis of the liver. (updated on 25-MAR-2003 to correct PR field.)
XX SQ Sequence 431 AA:
XX Query Match 100.0%; Score 111; DB 2; Length 431;
XX Best Local Similarity 100.0%; Pred. No. 1.8e-06;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 INPETHKPCCAPTQNLNAIS 20
DB 386 INPETHKPCCAPTQNLNAIS 405
RESULT 126

```

AAW27508  
ID AAW27508 standard; protein; 431 AA.  
AC AAW27508;  
XX  
DT 08-DEC-1997 (first entry)  
XX  
DE Human osteogenic protein 1.  
XX  
Human: cell surface; receptor; activin; kinase; ALK-1; osteogenic;  
KW protein; OP-1; analogue; antagonist; agonist; inhibition; tissue growth;  
KW osteosarcoma; Paget's disease; activin; bone; morphogenic; BMP-4;  
KW affinity purification; quantification; diagnosis; osteoporosis;  
KW aplastic bone disease; osteopenia; osteopenia; determination; screening;  
KW ligand; modulation; morphogen; gene therapy; stimulation; proliferation;  
KW differentiation; probe; identification.  
XX  
OS Homo sapiens.  
XX  
PN WO9707135-A2.  
XX  
PD 27-FEB-1997.  
XX  
PE 13-AUG-1996; 96WO-US013163.  
XX  
PR 14-AUG-1995; 95US-0002313P.  
XX  
PA (CREA-) CREATIVE BIOMOLECULES INC.  
XX (LUDW-) LUDWIG INST CANCER RES.  
XX  
PI Ichijo H, Nishitoh H, Sampath KT;  
XX WPI, 1997-165245/15.  
DR N-PSDB; AAT87879.  
XX  
PT Analogue of osteogenic protein-1, receptor complex and binding partner -  
PT used to inhibit effects of OP-1 on responsive cells, e.g. to treat  
PT osteosarcoma and Paget's disease.  
XX  
PS Claim 1; Page 55-56; 64pp; English.  
XX  
XX The present sequence is human osteogenic protein 1 (OP-1), a novel  
CC analogue of which binds the human, cell surface receptor, activin  
CC receptor like kinase 1 (ALK-1). The analogue can be applied to an OP-1  
CC responsive cell to antagonise OP-1 binding, or the induction of OP-1  
CC mediated cell responses. Typical uses include the inhibition of  
CC uncontrolled differentiated tissue growth, e.g. in osteosarcoma or  
CC Paget's disease. The disclosure also contemplates the possibility of some  
CC analogues being agonists. A similar effect on OP-1 responsive cells is  
CC achieved with soluble forms of ALK-1, or an OP-1 specific analogue, and,  
CC provided that the analogue is at least 60% homologous to residues 335 to  
CC 431 of OP-1, it will also antagonise the binding of activin and bone  
CC morphogenic protein 4 (BMP-4) to surface receptors. Other uses of the  
CC analogue include affinity purification and quantification of OP-1 and  
CC analogues, e.g. for diagnosis of osteoporosis, aplastic bone disease or  
CC osteopenia, or determination or quantification of ALK-1. ALK-1 can be  
CC used to screen for ligands that modulate endogenous morphogen receptor  
CC expression levels. Chimeric forms of ALK-1, having domains from other  
CC receptors or cell surface molecules, can be used similarly and in gene  
CC therapy, or in combination with a specific morphogen agonist, to  
CC stimulate proliferation and differentiation of implanted cells, i.e. non-  
CC endogenous, cells. Nucleic acid probes based on the ALK-1 cDNA can be  
CC used to identify other OP-1 specific receptors, and their tissue  
CC distribution  
XX  
SQ Sequence 431 AA;  
Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

DB 386 INPETHKPCAPTOLNALS 405  
RESULT 127  
AAW34783  
ID AAW34783 standard; protein; 431 AA.  
XX  
AC AAW34783;  
XX  
DT 08-APR-1998 (first entry)  
XX  
DE Human osteogenic protein-1.  
XX  
KW Generic protein; central nervous system; recovery enhancer; CNS; human;  
KW ischaemia; trauma recovery; osteogenic protein-1; OP-1; Drosophila; DPP;  
KW bone morphogenic protein 7; BMP-7; mouse; OP-2; BMP-8; GDF-1; BMP-2A;  
KW BMP-2B; BMP-3; BMP-5; BMP-6; 60A; Vg1; Vgr-1; stroke; therapy.  
XX  
XX  
OS Homo sapiens.  
XX  
PN WO9734626-A1.  
XX  
PD 25-SEP-1997.  
XX  
PE 21-MAR-1997; 97WO-US004177.  
XX  
PR 22-MAR-1996; 96US-0062044A.  
XX  
PA (CREA-) CREATIVE BIOMOLECULES INC.  
XX (GENH-) GEN HOSPITAL CORP.  
XX  
PI Charette MF, Finklestein SP;  
XX WPI, 1997-479990/44.  
DR N-PSDB; AAT93810.  
XX  
PT Administration of tissue specific morphogenesis inducing dimeric protein  
PT - enhances recovery of CNS function in mammal afflicted with ischaemia or  
PT trauma.  
XX  
PS Claim 16; Page 44-45; 72pp; English.  
XX  
XX This sequence represents the human osteogenic protein-1 (OP-1), and can  
CC be used in the method of the invention. The method is for enhancing  
CC recovery of central nervous system (CNS) function in a mammal afflicted  
CC with a CNS injury selected from ischaemia or trauma, and comprises: (i)  
CC administering a tissue specific morphogenesis inducing dimeric protein  
CC comprising: (a) a pair of folded polypeptides having at least 70%  
CC homology to the carboxy terminal 7-cysteine domain of OP-1 (also known as  
CC bone morphogenic protein 7 (BMP-7)); (b) a pair of folded polypeptides  
CC having generic sequence 7, 8, 9 or 10; or (ii) administering human OP-  
CC mouse OP-1 or OP-2 (also known as BMP-8), GDF-1, BMP-2A, BMP-3,  
CC BMP-5, BMP-6, 60A (Drosophila BMP-7 analogue) DPP (Drosophila BMP-2A  
CC analogue), Vg1 or Vgr-1 or a conservative substitution variant. The  
CC genetic sequences were constructed to accommodate the homology to all of  
CC the proteins in part (ii) of the method. The method can be used to treat  
CC mammals whose CNS tissue had been damaged or lost due to stroke or a  
CC mechanical) trauma affecting the CNS  
XX  
SQ Sequence 431 AA;  
Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPTOLNALS 20  
|||||

RESULT 128  
AAW53179

XX	AAW53179 standard; protein; 431 AA.
XX	AAW53179;
XX	17-JUL-1998 (first entry)
XX	Human osteogenic protein (HOP)-1.
XX	Osteogenic protein; morphogenic; epithelial cell; gene expression; human; HOP-1.
XX	Homo sapiens.
XX	
XX	Key Location/Qualifiers
FT	Peptide 1..29
FT	/note= "signal peptide"
FT	Peptide 30..292
FT	/note= "propeptide sequence"
FT	Protein 293..431
FT	/note= "mature protein sequence claimed in claim 1"
PN	US5741641-A.
XX	
XX	21-APR-1998.
XX	
XX	26-MAY-1995; 95US-00451953.
XX	
PR	11-MAR-1991; 91US-00667274.
PR	30-AUG-1991; 91US-00752764.
PR	30-AUG-1991; 91US-00752861.
PR	28-AUG-1992; 92US-00938021.
PR	20-JUL-1994; 94US-00278729.
XX	
XX	(CREA-) CREATIVE BIOMOLECULES INC.
PA	Kubersampah T, Oppermann H, Pang RHL, Cohen CM, Ozkaynak E;
PI	Rueger DC, Smart JE;
PI	N-PSDB; AAV19533.
DR	WPI; 1998-260436/23.
DR	N-PSDB; AAV19533.
PT	Method for identifying an epithelial cell tissue source which contains a cellular gene for morphogenic protein expression - by incubating at least two preparations of epithelial cells with a compound shown to modulate morphogenic gene expression.
PT	
XX	
XX	Disclosure; Col 43-48; 48pp; English.
XX	
CC	This is a human osteogenic protein (HOP)-1 sequence. The osteogenic proteins are morphogenically active proteins and can be used in a method for identifying an epithelial cell tissue source in which the expression of a cellular gene encoding a protein comprising a naturally occurring polypeptide can be modulated with a compound shown to modulate gene expression. The method comprises incubating the epithelial cells with the compound until expression of the cellular gene has been modulated.
CC	Assaying for the polypeptide where the change in the level of the polypeptide relative to the level in the epithelial cells incubated without the compound indicates an epithelial cell tissue source in which the expression of the cellular gene is modulated. The polypeptide, when specified, has the property of inducing a developmental cascade of tissue specific morphogenesis. The polypeptide sequence can be selected from HOP-1, mouse osteogenic protein (MOP)-1, HOP-2, MOP-2, Drosophila decapentaplegic gene product (DPP), Xenopus Vg1, murine Vgf-1, human BMP-2A or BMP-2B, human BMP3, BMP5 or BMP6, human GDF-1 or Drosophila 60A proteins or naturally occurring variants
CC	
XX	Sequence 431 AA;
SQ	
XX	Query Match 100.0%; Score 111; DB 2; Length 431;
XX	Best Local Similarity 100.0%; Pred. No. 1,9e-06;
XX	Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0
XX	1 INDETVKPCCAFTQLTAIS 20

[illegible]



Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNMAIS 20  
 DB 386 INPETHKPCCAPTQLNMAIS 405

RESULT 130  
 AAW71356  
 ID AAW71356 standard; protein; 431 AA.

AC AAW71356;

XX 14-DEC-1998 (first entry)

DE Human osteogenic protein 1.

XX Human; osteogenic protein; bone; cartilage; osteochondral defect;

KM endochondrial bone; articular cartilage; prosthesis repair;

XX spinal fusion; scoliosis; allograft repair.

OS Homo sapiens.

XX WO9841246-A2.

XX 24-SEP-1998.

XX 20-MAR-1998; 98MO-US006043.

XX 20-MAR-1997; 97US-00822186.

XX (CREA-) CREATIVE BIOMOLECULES INC.

PI Rueger DC, Tucker MM, Chang A;

XX WPI; 1998-520968/44.

DR N-PSDB; AAV60227.

XX Device for inducing growth of bone and cartilage containing osteogenic

PT protein - formulated with non-synthetic, non-polymeric matrix and binding

XX agent; produces stable repairs with only small doses of protein.

PS Claim 5; Page 132-134; 146pp; English.

XX The osteogenic protein is used, along with a matrix derived from a non-

CC synthetic, non-polymeric material and a binding agent, to create a device

CC for inducing local formation of bone or cartilage. The devices are used

CC for local repair of bone, cartilage and osteochondral defects (e.g. (non-

CC defects, or non-union fractures) and induces formation of endochondral

CC bone or articular cartilage. Particular applications are in repair of

CC degenerative/deteriorative conditions (e.g. osteochondritis dissecans);

CC in conditions requiring much reconstructive surgery; prosthesis repair;

CC spinal fusions; scoliosis; carnial/facial repair and massive allograft

XX repairs

XX Sequence 431 AA;

XX Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNMAIS 20  
 DB 386 INPETHKPCCAPTQLNMAIS 405

RESULT 131

AAW80749  
 ID AAW80749 standard; protein; 431 AA.

XX

AC AAW80749;

XX 11-JAN-1999 (first entry)

DE Human osteogenic protein.

XX Osteogenic protein; OP1; human; bone morphogenetic protein; morphogen;

KM osteogenic device.

XX Homo sapiens.

XX Key Location/Qualifiers

FT Domain 330..431

XX /note="7-cysteine domain"

XX WO9834655-A1.

XX 13-AUG-1998.

XX 05-FEB-1998; 98MO-US002159.

XX 07-FEB-1997; 97US-0037327P.

XX 29-MAY-1997; 97US-0047909P.

XX (CREA-) CREATIVE BIOMOLECULES INC.

XX Rueger DC, Tucker MM;

XX WPI; 1998-542236/46.

DR N-PSDB; AAV65199.

XX Inducing or accelerating bone formation in defects - using an osteogenic

PT protein alone or dispersed in a non-rigid, amorphous carrier.

XX Disclosure; Page 63-64; 79pp; English.

XX This is the amino acid sequence of human osteogenic protein (OP1). A

CC claimed method of inducing bone formation sufficient to fill a defect

CC locus defining a void comprises providing to the locus, an osteogenic

CC device comprising an osteogenic protein dispersed in a biocompatible, non

CC rigid, amorphous carrier having no defined surfaces. Suitable osteogenic

CC proteins include OP1, OP2, bone morphogenetic proteins 2, 3, 4, 5, 6, 9,

CC 10, 11, 12, 15, and 3b, Dpp, Vg1, Vgr, 60A, and GDF 1, 3, 5, 6, 7, 8, 9,

CC 10 or 11. A claimed method for enhancing the quantity or quality of

CC callus formation at an osteogenic defect locus in a mammal involves

CC administering a device that comprises osteogenic protein dispersed in a

CC biocompatible, non-rigid amorphous carrier having no defined surfaces.

CC The osteogenic protein is selected from OP1 or OP2 (see AAW80750 for

CC generic sequences), or proteins defined by the generic sequences given in

CC AAW80751-53. The devices may be used for repairing bone, cartilage and/or

CC osteochondral defects. They are able to fill critical size defects and

CC are able to accelerate the rate, and enhance the quality of bone

CC formation in non-critical size defects. The device is typically an

XX injectable composition

XX Sequence 431 AA;

Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNMAIS 20  
 DB 386 INPETHKPCCAPTQLNMAIS 405

RESULT 132

AAW48910  
 ID AAW48910 standard; protein; 431 AA.

AC AAW48910;

XX 29-SEP-1998 (first entry)

XX

```

XX DE Human osteogenic protein 1 (OP-1).
XX KM OP-1; osteogenic protein 1; human; morphogen; sense perception; cataract;
XX KM scotomata; glaucoma; photophobia; night blindness; retinal detachment;
XX KM Sjogren's syndrome.
XX OS Homo sapiens.
XX FT Key Location/Qualifiers
XX FT Peptide 1..29
XX FT /label= Sig_peptide
XX FT Protein 30..292
XX FT /label= Pro_peptide
XX FT Protein 293..431
XX FT /label= Mat_protein
XX FT Domain 330..431
XX FT /label= Seven-cysteine_domain
XX FT /note= "Claim 6"
XX PN MO9820889-A1.
XX PD 22-MAY-1998.
XX PF 05-NOV-1997; 97WO-US020071.
XX PR 15-NOV-1996; 96US-00751227.
XX PA (CREA-) CREATIVE BIOMOLECULES INC.
XX PI Sampath KT, Rueger DC, Cohen CM, Charette MF;
XX DR WPI; 1998-297606/26.
XX DR N-PSDB; AAV32583.
XX PS Preserving or restoring percipient function of eye, ear or nose - useful
XX PT for, e.g. treating ophthalmic disorders such as macular degeneration,
XX PT glaucoma, cataract or retinal detachment.
XX PS Claim 6; Page 74-75; 130pp; English.
XX CC This polypeptide comprises human hippocampus osteogenic protein (OP-1). A
XX CC claimed method of preserving or restoring a placode-derived sense
XX CC perception organ of neuroectodermal origin (especially an eye, nose or
XX CC ear) in a vertebrate involves providing a morphogen to the organ or
XX CC alternatively providing morphogen-stimulated progenitor cells (PC) to
XX CC produce replacement tissue. A preferred morphogen is the claimed seven-
XX CC cysteine domain of human OP-1. The method is used to treat disorders of
XX CC eye, ear or nose, especially ophthalmic tissue which has been damaged,
XX CC surgically, accidentally, as a result of exposure to cold, light,
XX CC chemicals etc., by pathogens or by degenerative disorders (specifically
XX CC cataracts, scotomata, glaucoma, photophobia or night blindness).
XX CC Especially, the morphogen: (a) promotes regeneration of damaged retina or
XX CC cornea; (b) prevents retina from becoming anergic; (c) causes regression
XX CC of neovascularisation by inhibiting angiogenesis; (d) induces neurite
XX CC extension in retinal cells; (e) normalises intraocular pressure and light
XX CC transmittability in transparent eye tissue; (f) maintains accommodation
XX CC (prevents loss of lens elasticity); (g) accelerates integration of
XX CC prostheses, and (h) maintains lacrimal gland function (specifically for
XX CC treating Sjogren's syndrome) (all claimed)
XX SQ Sequence 431 AA;
XX
XX Query Match 100.0%; Score 111; DB 2; Length 431;
XX Best Local Similarity 100.0%; Pred. No. 1.8e-06;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX QY 1 INPETHKPCCAPTQLNIAIS 20
XX DB 386 INPETHKPCCAPTQLNIAIS 405
XX
XX RESULT 133

```

```

AAW59764
XX ID AAW59764 standard; protein; 431 AA.
XX AC AAW59764;
XX DT 26-OCT-1998 (first entry)
XX DE Morphogenically active osteogenic protein-1.
XX KM Morphogen; osteogenic protein-1; OP-1; sensory perception deficit;
XX KM hearing loss; sensory hair cell; aminoglycoside antibiotic; cisplatin;
XX KM human; ophthalmic neovascularisation; macular degeneration; torn retina;
XX KM ophthalmic inflammation; agonist.
XX OS Homo sapiens.
XX PN MO9820890-A1.
XX PD 22-MAY-1998.
XX PF 14-NOV-1997; 97WO-US020743.
XX PR 15-NOV-1996; 96US-00751227.
XX PA (CREA-) CREATIVE BIOMOLECULES INC.
XX PI Sampath K, Rueger DC, Cohen CM, Charette MF, Jin DF;
XX DR WPI; 1998-297607/26.
XX DR N-PSDB; AAV41572.
XX PS Treating symptoms of sensory perception deficit using morphogen(s) -
XX PT useful for, e.g. maintaining, restoring or preserving sensory hair cells
XX PT in cochlea.
XX PS Claim 2; Page 62-63; 82pp; English.
XX CC This is the amino acid sequence of the morphogenically active osteogenic
XX CC protein-1 (OP-1), used in the method of the invention to treat symptoms
XX CC of sensory perception deficit. This maintains, and restores or preserves
XX CC sensory perception. Specifically OP-1 is used in cases of hearing loss
XX CC caused by loss of sensory hair cells, e.g. as a result of treatment with
XX CC aminoglycoside antibiotics, cisplatin or sound. More generally it can be
XX CC used in human or veterinary medicine to treat any neural tissue injury or
XX CC neuropathy. Typical of many examples are corneal wounds, ophthalmic
XX CC neovascularisation, macular degeneration, torn retina or ophthalmic
XX CC inflammation. The function of OP-1 may be replaced by an agonist
XX SQ Sequence 431 AA;
XX
XX Query Match 100.0%; Score 111; DB 2; Length 431;
XX Best Local Similarity 100.0%; Pred. No. 1.8e-06;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX QY 1 INPETHKPCCAPTQLNIAIS 20
XX DB 386 INPETHKPCCAPTQLNIAIS 405
XX
XX RESULT 134
XX AAY17391
XX ID AAY17391 standard; protein; 431 AA.
XX AC AAY17391;
XX DT 22-JUL-1999 (first entry)
XX DE Human osteogenic protein OP-1.
XX KM Human; osteogenic protein; OP-1; OPX; morphogen; stroke;
XX KM neuronal cell loss; Alzheimer's disease; Parkinson's disease;
XX KM Huntington's disease; senile dementia; alcohol-induced dementia.
XX

```

OS Homo sapiens.  
 XX WO9921574-A2.  
 PN  
 XX  
 PD 06-MAY-1999.  
 XX  
 PF 26-OCT-1998; 98WO-US022655.  
 XX  
 PR 27-OCT-1997; 97US-0063624P.  
 XX  
 PA (CREA-) CREATIVE BIOMOLECULES INC.  
 PI Charette MF, Rueger DC, Higgins D;  
 XX WPI; 1999-326638/27.  
 DR N-PSDB; AAX56414.  
 XX  
 PT Potentiating morphogen activity useful for treating Alzheimer's disease.  
 PT Parkinson's disease and Huntington's disease.  
 XX  
 PS Claim 16; Page 58-59; 62pp; English.  
 XX  
 CC A method has been developed for potentiating morphogen activity. The  
 CC method comprising administering to a mammal a composition comprising a  
 CC molecule capable of releasing morphogen inhibition. The method is useful  
 CC for promoting neuronal cell growth by potentiating growth-promoting  
 CC effects of endogenous morphogens and is therefore useful for treating  
 CC disorders characterized by neuronal cell loss, including Alzheimer's  
 CC disease, Parkinson's disease, Huntington's disease, senile dementia,  
 CC alcohol-induced dementia and stroke. The present sequence represents  
 CC human osteogenic protein Op-1 which can be used as a morphogen in the  
 CC method of the invention  
 XX  
 SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCCAPTQNAIS 20  
 |||  
 DB 386 INPETHPKPCCAPTQNAIS 405

## RESULT 135

AAW86382  
 ID AAW86382 standard; protein; 431 AA.

AC AAW86382;

DT 30-MAR-1999 (first entry)

XX Human osteogenic protein 1.

XX Osteogenic protein; OP-1; tissue morphogenesis; morphogenic protein;  
 KW bone fracture; osteochondrial defect; myocardium; infarction;  
 KW axonal nerve regeneration; liver cirrhosis; ulcerative bowel disease;  
 KW emphysema; inflammatory disease; lung.

XX Homo sapiens.

PN WO9854572-A1.

PD 03-DEC-1998.

PF 29-MAY-1998; 98WO-US010909.

PR 30-MAY-1997; 97US-0048062P.

PR 30-MAY-1997; 97US-0048063P.

XX (CREA-) CREATIVE BIOMOLECULES INC.

PI Sampath KT, Cohen CM;  
 XX WPI; 1999-080815/07.  
 DR N-PSDB; AAW80735.  
 XX

PT Evaluating systemic activity of morphogenic proteins at localized defect  
 PT sites - useful for determining pharmacokinetics and efficacy of  
 PT morphogenic and osteogenic proteins for systemic treatment of tissue  
 PT defects.

PS Disclosure; Page 60-61; 93pp; English.

CC A method has been developed for evaluating the morphogenic activity of a  
 CC candidate morphogenic protein (MP) or its analogues. The method  
 CC comprises: (1) creating a local permissive defect site in a mammal; (2)  
 CC administering a candidate MP systemically to the mammal; and (3)  
 CC measuring the ability of the candidate protein to induce new tissue  
 CC formation at the defect site. The test method is used to assess efficacy  
 CC and pharmacokinetic properties of the MP, e.g. to evaluate dosage, to  
 CC determine preferred administration times and routes for particular  
 CC individuals, including effect of supplementary agents. Osteogenic  
 CC proteins (OP) are particularly used to repair bone fractures,  
 CC osteochondrial defects and defects too large to heal naturally. MP are  
 CC used to treat defects in a very wide range of tissue, e.g. the myocardium  
 CC in cases of infarction; to stimulate axonal nerve regeneration; for  
 CC treating liver cirrhosis, ulcerative bowel disease, emphysema or other  
 CC inflammatory diseases of the lung. The in vivo activity of MP can be  
 CC assessed quickly. When MP and OP are administered systemically, only a  
 CC single injection may be sufficient, when given a significant time after  
 CC injury, even after the development of fibrosis has started. This method  
 CC of administration allows non-surgical repair of defects and increases the  
 CC rate and quality of replacement tissue formation, even in compromised  
 CC patients. The present sequence represents human Op-1 from the present  
 CC invention  
 XX  
 SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCCAPTQNAIS 20  
 |||  
 DB 386 INPETHPKPCCAPTQNAIS 405

## RESULT 136

AAI28656  
 ID AAY28656 standard; protein; 431 AA.

AC AAY28656;

DT 19-OCT-1999 (first entry)

XX Human osteogenic protein 1.

XX Human osteogenic protein 1; hOP 1; morphogenic protein; TGF-Beta;  
 KW cognitive function; progenitor cell; functional replacement tissue;  
 KW precursor; cysteine conserved pattern; carboxy terminal active domain;  
 KW memory dysfunction; neuroprotective effect; brain tissue damage; trauma;  
 KW oxygen deprivation; glucose deprivation; neurocortex; dementia; senility;  
 KW neurodegenerative disorder; cardiac arrest; glucose metabolism disorder;  
 KW Alzheimer's disease; pro-domain; anorexia; Parkinson's disease.

XX Homo sapiens.

XX Key location/Qualifiers

FT Domain 330..431 /label= Carboxy-terminal\_active\_domain

FT /note= "Conserved pattern of cysteine residues"

PN WO9937320-A1.

PD 29-JUL-1999.  
 XX 21-JAN-1999; 99WO-US001232.  
 XX 23-JAN-1998; 98US-00012846.  
 PA (CREA-) CREATIVE BIOMOLECULES INC.  
 PI Charette MF;  
 XX WPI; 1999-478984/40.  
 DR N-PSDB; AAX80559.  
 XX  
 PT Protection of cognitive function using morphogenic proteins.  
 PS Claim 15a; Page 63-64; 74pp; English.  
 XX  
 CC The present sequence is the human osteogenic protein 1 (hOP-1) which is a  
 CC morphogenic protein and is a representative of the TGF-Beta subclass of  
 CC true tissue morphogens. The morphogenic proteins are capable of inducing  
 CC the proliferation and differentiation of progenitor cells into functional  
 CC replacement tissue and can be used for restoring, improving and from a  
 CC precursor having an N-terminal signal peptide followed by a pro-domain.  
 CC The pro-domain is cleaved to yield the mature C-terminal active domain  
 CC which includes a conserved pattern of cysteines. The protein can be used  
 CC to reduce memory dysfunction and provides a neuro-protective effect in  
 CC mammals with brain tissue damage resulting from mechanical or chemical  
 CC trauma, oxygen or glucose deprivation, neuro-toxin, a neurodegenerative  
 CC disorder or dementia. The subject may be afflicted with cardiac arrest,  
 CC Alzheimer's disease, senility, glucose metabolism disorder, anorexia and  
 CC Parkinson's disease  
 XX  
 SQ Sequence 431 AA;  
 Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTQLNIAIS 20  
 |||||  
 DB 386 INPETHKPCCAPTQLNIAIS 405  
 RESULT 137  
 AAM89679  
 ID AAM89679 standard; protein; 431 AA.  
 XX  
 AC AAM89679;  
 XX  
 DT 20-MAR-2003 (revised)  
 DT 24-MAR-1999 (first entry)  
 XX  
 DE Human osteogenic protein OP-1.  
 XX  
 KW Human; osteogenic protein; OP-1; OPX; endochondral bone formation;  
 KW cartilage; craniofacial defect; skeletal disorder; dental disorder;  
 KW non-union fracture; osteoarthritis; vascularisation; mineralisation;  
 KW bone marrow differentiation.  
 XX  
 OS Homo sapiens.  
 XX  
 PN US5863758-A.  
 XX  
 PD 26-JAN-1999.  
 XX  
 PF 23-MAY-1995; 95US-00449700.  
 XX  
 PR 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.

PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 PR 01-NOV-1993; 93US-00147023.  
 XX  
 PA (STYC) STRYKER CORP.  
 XX  
 PI Pang RHL, Rueger DC, Kuberanampath T, Oppermann H, Ozkayrak E;  
 XX  
 DR WPI; 1999-131303/11.  
 DR N-PSDB; AAX00229.  
 XX  
 PT Nucleic acid encoding mammalian osteogenic proteins in prepro form - able  
 PT to induce cartilage and bone formation when implanted in matrix, useful  
 PT for repairing bone defects.  
 PS Claim 1; Col 63-66; 127pp; English.  
 XX  
 CC The present invention describes isolated DNA (I) encoding at least one  
 CC osteogenically active region of human osteogenic protein-1 in prepro form  
 CC (OP-PP), murine OP1-PP, murine OP2-PP or human OP2-PP. Also described  
 CC are: (A) DNA related to (I) encoding a polypeptide able to form dimers  
 CC that can induce cartilage and endochondral bone formation in a mammal;  
 CC (C) host cells transformed with this vector; (D) DNA (I') encoding a  
 CC prepro- or pro-OP1, and related vectors and transformed cells; (E)  
 CC osteogenic protein (II) produced by expression of transformed mammalian  
 CC cells, able to induce bone and cartilage formation; (F) mature OP1  
 CC secreted from mammalian cells following expression of the sequence that  
 CC encodes hOP1-PP; and (G) production of an active osteogenic composition  
 CC by truncating mature OP1 protein. Host cells of (C) are used to produce  
 CC proteins able to induce cartilage and bone formation, e.g. for correction  
 CC of acquired or congenital craniofacial defects or other skeletal or  
 CC dental disorders; to heal non-union fractures; to repair cartilage, e.g.  
 CC in osteoarthritis, or generally wherever bone formation is required. The  
 CC proteins induce complete development of endochondral bone, including  
 CC vascularisation, mineralisation and bone marrow differentiation. The  
 CC present sequence represents human OP1. (Updated on 20-MAR-2003 to correct  
 CC PA field.)  
 XX  
 SQ Sequence 431 AA;  
 Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTQLNIAIS 20  
 |||||  
 DB 386 INPETHKPCCAPTQLNIAIS 405  
 RESULT 138  
 AAM95448  
 ID AAM95448 standard; protein; 431 AA.  
 XX  
 AC AAM95448;  
 XX  
 DT 26-MAR-1999 (first entry)  
 DT 26-MAR-1999 (first entry)  
 XX  
 DE Human osteogenic protein 1 (OP1).  
 XX  
 KW Cystic kidney disease; renal; therapeutic; osteogenic protein; OP;  
 KW bone morphogenic protein; BMP; growth factor-beta superfamily;  
 KW polycystic kidney disease; multicystic dysplastic kidney disease;

KM uraemic medullary cystic disease; human; OPI.  
 XX Homo sapiens.  
 OS  
 XX WO9850061-A1.  
 PN  
 XX  
 PD 12-NOV-1998.  
 PF 06-MAY-1998; 98WO-US009268.  
 XX  
 XX 07-MAY-1997; 97US-0045909P.  
 PR  
 XX (BIOJ ) BIOGEN INC.  
 PA  
 XX Gjoerstrup P, Harris R;  
 PI  
 XX WPI; 1999-070084/06.  
 DR  
 XX  
 XX Treating cystic kidney disease - using renal therapeutic agents or  
 PT sequences encoding them, especially from the osteogenic protein/bone  
 PT morphogenic protein family.  
 PS  
 XX Claim 4; Page; 67pp; English.  
 CC The invention relates to methods for treating cystic kidney diseases. The  
 CC method comprises administering an effective amount of a renal therapeutic  
 CC agent or a polynucleotide encoding the therapeutic agent. The therapeutic  
 CC agent is preferably a soluble or membrane bound polypeptide, e.g. a  
 CC member of the osteogenic protein/bone morphogenic protein (Op/BMP) family  
 CC with a transforming growth factor-beta superfamily of proteins. It is  
 CC especially one of the polypeptides hOP1, hOP1-PP, OP1-18Ser, OP1, OP7,  
 CC OP1-18Ser, OP1-16Ieu, OP1-16Met, OP1-16Ala, OP1-16Val, MOP1, MOP1-PP,  
 CC hOP2, hOP2-PP, hOP2-Ala, hOP2-Pro, hOP2-Arg, or hOP2-Ser or their  
 CC biologically active homologues. The method is used to treat humans  
 CC having, or at risk of, cystic kidney disease, e.g. autosomal recessive  
 CC (infantile) polycystic disease, multicystic dysplastic kidney disease,  
 CC uraemic medullary cystic disease, and autosomal dominant polycystic  
 CC kidney disease. The present sequence represents a prepro form of the  
 CC human osteogenic protein 1 (OP1) that can be used as a therapeutic agent  
 CC in the method of the invention. Note: This sequence is not provided in  
 CC the specification. It has been obtained from U.S. Patent No. 5,266,663  
 CC  
 SQ Sequence 431 AA;  
 QY  
 DB 1 INPETHKPCCAPTOLNAIS 20  
 386 INPETHKPCCAPTOLNAIS 405  
 RESULT 139  
 AAY24093  
 ID AAY24093 standard; protein; 431 AA.  
 XX  
 AC AAY24093;  
 XX  
 DT 08-SEP-1999 (first entry)  
 XX  
 DE Human osteogenic protein OP-1.  
 XX  
 XX Mouse; type 10 collagen promoter; Apl sequence A; osteogenic protein;  
 XX OP-1; morphogen; bone morphogenic protein; BMP; soft tissue disorder;  
 XX apoptosis; morphogen-activated regulatory pathway; tumour;  
 XX cellular immune rejection; viral disease.  
 OS Homo sapiens.  
 XX  
 XX WO9931136-A2.  
 PN  
 XX 24-JUN-1999.  
 PD

XX  
 XX 16-DEC-1998; 98WO-US026788.  
 PF  
 XX 17-DEC-1997; 97US-0069931P.  
 PR  
 XX 01-DEC-1998; 98US-0110498P.  
 XX  
 XX (CREA-) CREATIVE BIOMOLECULES INC.  
 PA  
 XX  
 XX Sampath KT, Cohen CW, Oeda E, Miyazono K, Kawabata M;  
 PI  
 XX WPI; 1999-418756/35.  
 DR  
 XX N-PSDB; AAX83980.  
 PT  
 XX Maintaining or restoring tissue-appropriate phenotype.  
 PS  
 XX Disclosure; Page 47-50; 50pp; English.  
 CC A method has been developed for maintaining or restoring tissue-  
 CC appropriate phenotype by expression of a phenotype-specific protein or by  
 CC inhibiting an intracellular pathway that induces expression of a gene  
 CC that is an inhibitor of normal phenotype. The method is for restoring  
 CC cellular phenotype in a cell effected by disease, damage or age. The  
 CC method comprises activating an intracellular pathway that induces  
 CC expression of a phenotype-specific gene. Another method is also described  
 CC for restoring cellular phenotype in a cell effected by disease, damage or  
 CC age, comprising inhibiting an intracellular pathway that induces  
 CC expression of a gene (especially TGF-beta) that is an inhibitor of normal  
 CC phenotype. The methods can be used to treat soft tissue disorders by  
 CC affecting apoptosis by modulating a morphogen-activated, regulatory  
 CC pathway e.g. in tumours, cellular immune rejection and viral diseases.  
 CC The present sequence is used in the exemplification of the present  
 CC invention  
 XX  
 SQ Sequence 431 AA;  
 QY  
 DB 1 INPETHKPCCAPTOLNAIS 20  
 386 INPETHKPCCAPTOLNAIS 405  
 RESULT 140  
 AAY42797  
 ID AAY42797 standard; protein; 431 AA.  
 XX  
 AC AAY42797;  
 XX  
 DT 19-JAN-2000 (first entry)  
 XX  
 DE Human osteogenic protein OP-1.  
 XX  
 XX Osteogenic protein; OP-1; bone morphogenetic protein 7; BMP-7;  
 XX differentiation; proliferation; morphogenesis; morphogen; dimer;  
 XX heterodimer; homodimer; cysteine; mesenchymal cell; stem cell;  
 XX pluripotent; multipotent; progenitor; modulation; bone; osteogenesis;  
 XX adipogenesis; tissue; repair; regeneration; maintenance.  
 OS Homo sapiens.  
 XX  
 XX  
 XX Key Location/Qualifiers  
 XX Domain 330..431  
 FT /note="Active seven-cysteine C-terminal domain"  
 FT  
 XX WO9947156-A2.  
 PN  
 XX 23-SEP-1999.  
 PD  
 XX 12-MAR-1999; 99WO-US005533.  
 PF  
 XX 14-MAR-1998; 98US-0078027P.  
 PR



PF 15-MAY-1998; 98WO-US009951.  
XX  
XX 15-MAY-1997; 97US-0046589P.  
PR 14-MAR-1998; 98US-00039107.  
XX  
XX (CREA-) CREATIVE BIOMOLECULES INC.  
PA  
PI Rueger DC, Tucker MM;  
XX  
XX WPI; 1999-059691/05.  
DR N-PSDB; AAV80656.  
XX  
XX  
PT Inducing growth of new bone at a defect using osteogenic protein -  
PT incorporated in calcium phosphate matrix or coated on metal implant.  
XX  
XX Claim 3; Page 29-30; 58pp; English.  
PS  
XX A method has been developed for promoting new bone growth at a bone  
CC defect site in a mammal. The method involves; (1) implanting a calcium  
CC phosphate matrix, comprising at least one osteogenic protein, at the  
CC defect site; or (2) implanting at least one osteogenic protein as a  
CC coating on a metal implant. The present sequence represents human  
CC osteogenic protein OP-1. The method is used to repair all types of bone  
CC and/or cartilage defects, particularly in bones of the face (mandible or  
CC maxilla) or in cosmetic surgery. The metal implants are used to repair  
CC gap fractures. Use of a calcium phosphate matrix greatly improves the  
CC structure of the new bone growth, especially in short, irregular or flat  
CC bones (e.g. in head, face, hands and feet). The devices increase both  
CC rate and quality of new bone, particularly in compromised subjects such  
CC as diabetics  
CC  
XX  
SQ Sequence 431 AA;  
XX  
XX  
Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHPCPCAPPTOLNAIS 20  
DB 386 INPETHPCPCAPPTOLNAIS 405  
XX  
XX  
RESULT 143  
AAV18144  
ID AAV18144 standard; protein; 431 AA.  
XX  
XX AAV18144;  
AC  
XX  
XX 12-AUG-1999 (first entry)  
DT  
XX  
DE Human OP-1 protein sequence.  
XX  
XX OP-1; human; vector; morphogen expression; vascular disease; restenosis;  
XX vascular smooth muscle cell; proliferation inhibitor; atherosclerosis;  
XX vascular proliferative disease; angioplasty; therapy; collagen;  
XX extracellular matrix protein.  
XX  
XX Homo sapiens.  
OS  
XX  
XX WO9928341-A2.  
PN  
XX  
XX 10-JUN-1999.  
PD  
XX  
XX 30-NOV-1998; 98WO-US025398.  
PF  
XX  
XX 04-DEC-1997; 97US-0067690P.  
PR  
XX  
XX (CREA-) CREATIVE BIOMOLECULES INC.  
PA  
XX  
XX Nakaoka T, Miyazono K, Sampath KT;  
PI  
XX  
XX WPI; 1999-358109/30.  
DR  
XX  
XX N-PSDB; AAX79684.  
DR

XX  
XX Vectors expressing morphogens and related compositions.  
PT  
XX  
XX Claim 1; Page 39-41; 41pp; English.  
PS  
XX  
XX This sequence represents the human OP-1 protein. The invention relates to  
CC a vector for the expression of a morphogen in a mammalian cell. The  
CC vector comprises DNA encoding a morphogen comprising an amino acid  
CC sequence with at least 70% homology with the C-terminal 102-106 amino  
CC acids, including the conserved seven cysteine domain of OP-1. Vascular  
CC disease are characterized by an excessive build-up of vascular smooth  
CC muscle cells, resulting in an occlusion of a blood vessel, and/or by loss  
CC of elasticity in the blood vessels. The vector or a composition  
CC comprising the morphogen are used to inhibit proliferation of smooth  
CC muscle cells, to preserve the integrity of vascular tissue, protect  
CC smooth muscle from cytotoxicity, reduce inflammation of vascular  
CC epithelium, maintain the normal balance of type I and III collagen in  
CC smooth muscle tissue, treat a vascular proliferative disease, especially  
CC atherosclerosis or restenosis and to inhibit restenosis after  
CC angioplasty. All these treatments operate to preserve the cell phenotype  
CC by inhibiting an increase in extracellular matrix proteins, such as  
CC collagen, or by maintaining the normal balance of extracellular matrix  
CC proteins, such as types I and III collagen  
CC  
XX  
SQ Sequence 431 AA;  
XX  
XX  
Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHPCPCAPPTOLNAIS 20  
DB 386 INPETHPCPCAPPTOLNAIS 405  
XX  
XX  
RESULT 144  
AAV92587  
ID AAV92587 standard; protein; 431 AA.  
XX  
XX AAV92587;  
AC  
XX  
XX 10-AUG-2000 (first entry)  
DT  
XX  
XX Morphogenic protein OP-1.  
DE  
XX  
XX 60-A; finger 2 subdomain; BMP; TGF-beta family; protein refolding;  
XX fusion protein; osteopathic; antibacterial; cyostatic.  
XX  
XX Homo sapiens.  
OS  
XX  
XX Key Location/Qualifiers  
FH CDS 49..1344 /\*tag= a  
FT /product= "OP-1"  
XX  
XX WO200020449-A2.  
PN  
XX  
XX 13-APR-2000.  
PD  
XX  
XX 07-OCT-1999; 99WO-US023372.  
PF  
XX  
XX 07-OCT-1998; 98US-0103418P.  
PR  
XX  
XX 16-AUG-1999; 99US-00375333.  
PR  
XX  
XX (STYC ) STRYKER CORP.  
PA  
XX  
XX Oepfermann H, Tai M, Mcartney J;  
PI  
XX  
XX WPI; 2000-303743/26.  
DR  
XX  
XX N-PSDB; AAA09390.  
DR  
XX  
XX A biologically active TGF-beta family member fusion protein competent to  
PT refold, comprising a C-terminal linked TGF-beta family protein.

XX Example 1; Page 136-139; 160pp; English.

XX CC Knowing the sequence of OP-1 and its C-terminal seven cysteine domain is useful for the construction of BMP mutants. Novel proteins comprise biologically active TGF-beta family member fusion proteins competent to refold under suitable refolding conditions. The fusion proteins comprise: (1) a TGF-beta family protein C-terminal seven cysteine domain, comprising finger 1, finger 2 and heel subdomains; and (2) a heterologous leader sequence domain operatively linked to the C-terminal domain. Truncations, heterodimers and mutants of these fusion proteins and methods of purifying the heterodimers are also claimed. The TGF-beta family proteins can be used to induce the full cascade of morphogenic events which culminate in skeletal tissue formation, including cartilage and endochondral bone formation. They are useful in the binding of fibrin and fibronectin to the implanted matrix, chemotaxis of cells, proliferation of fibroblasts, differentiation into chondroblasts, cartilage formation, vascular invasion, bone formation, remodeling, and bone marrow differentiation. The proteins have improved physical properties such as solubility and stability, improved biological activity, including altered receptor binding and improved targeting capabilities.

CC Sequence 431 AA;

XX

CC Query Match 100.0%; Score 111; DB 3; Length 431;

CC Best Local Similarity 100.0%; Pred. No. 1.8e-06;

CC Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPETHKPCCAPTQNAIS 20  
| | | | | | | | | | | | | | | | | | | | | |  
Db 386 INPETHKPCCAPTQNAIS 405

RESULT 145  
AAB09598  
ID AAB09598 standard; protein; 431 AA.  
XX  
AC AAB09598;  
XX  
DT 11-SEP-2000 (first entry)  
XX  
DE Human OP-1 mutant protein R426D.  
XX  
XX Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
KW transforming growth factor-beta; developmental regulation;  
KW finger 2 subdomain; basic region; protein refolding; stability;  
KW solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
KW connective tissue; cartilage; vulnery; mutant; muteln.  
XX  
XX Homo sapiens.  
OS Synthetic.  
XX  
XX WO200020607-A2.  
XX  
XX 13-APR-2000.  
XX  
XX 07-OCT-1999; 99WO-US023371.  
XX  
XX 07-OCT-1998; 98US-0103418P.  
XX 16-AUG-1999; 99US-00374958.  
XX  
XX (STYC ) STRYKER CORP.  
XX  
XX Oppermann H, Tai M, McCartney J;  
XX  
XX WPI, 2000-303787/26.  
XX  
XX Transforming growth factor-beta superfamily member mutant induces tissue morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental tissue and connective tissue and comprises a substitution in a region of the finger 2 domain.

PS Claim 22; Page; 162pp; English.

XX

XX The invention relates to mutant TGF-beta (transforming growth factor-beta) superfamily members. These mutants comprise one or more amino acid substitutions in the base region of the finger 2 subdomain, and a C-terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g., Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-beta superfamily proteins regulate developmental processes and include proteins such as the osteogenic proteins (OPs), bone morphogenetic proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors. Specific examples of TGF-beta superfamily mutants encompassed by the invention are the finger 2 subdomain mutants of human osteogenic protein-1 (OP-1) (AAB09576-809615). Mutant TGF-beta proteins are used for inducing tissue morphogenesis in bone, non-mineralized skeletal tissue, dental tissue, connective tissue, brain, liver and nerve tissue. The proteins can be used in conjunction with a biocompatible matrix e.g., collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone, cartilage and/or other mineralized skeletal or connective tissues e.g., ligament, tendon, muscle, fibrocartilage, joint capsule and intervertebral discs. The OP-1 mutants can be used to repair diseased or damaged mammalian tissue and to prevent or substantially inhibit immune/inflammatory response-mediated tissue damage and scar tissue formation following an injury. Compared to the wild-type TGF-beta superfamily members, the mutant proteins have improved in vitro refolding properties in a pH range of 6-9, increased solubility in aqueous solution and improved stability and/or activity. Sequences AAB09547-B09548 and AAB09576-B09615 represent mutant or chimeric forms of human osteogenic protein-1 (OP-1). Note: The present sequence is not shown in the specification, but is derived from the wild-type human OP-1 sequence given on page 138-139

XX

XX Sequence 431 AA;

XX

XX Query Match 100.0%; Score 111; DB 3; Length 431;

XX Best Local Similarity 100.0%; Pred. No. 1.8e-06;

XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPETHKPCCAPTQNAIS 20  
| | | | | | | | | | | | | | | | | | | | | |  
Db 386 INPETHKPCCAPTQNAIS 405

RESULT 146  
AAB09518  
ID AAB09518 standard; protein; 431 AA.  
XX  
AC AAB09518;  
XX  
DT 11-SEP-2000 (first entry)  
XX  
DE Human morphogenic protein OP-1, SEQ ID NO:39.  
XX  
XX Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
KW transforming growth factor-beta; developmental regulation;  
KW finger 2 subdomain; basic region; protein refolding; stability;  
KW solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
KW connective tissue; cartilage; vulnery.  
XX  
XX Homo sapiens.  
OS Synthetic.  
XX  
XX WO200020607-A2.  
XX  
XX 13-APR-2000.  
XX  
XX 07-OCT-1999; 99WO-US023371.  
XX  
XX 07-OCT-1998; 98US-0103418P.  
XX 16-AUG-1999; 99US-00374958.  
XX  
XX (STYC ) STRYKER CORP.  
XX



Tue Oct 26 09:17:05 2004

us-10-619-910-11.oct24.rag

Page 75

PI Opermann H, Tai M, Mccartney J;  
XX WPI; 2000-303787/26.  
XX  
PT Transforming growth factor-beta superfamily member mutant induces tissue  
PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
PT tissue and connective tissue and comprises a substitution in a region of  
PT the finger 2 domain.  
XX  
XX  
PS Claim 2; Page 138-139; 162pp; English.

CC The invention relates to mutant TGF-beta (transforming growth factor-  
CC beta) superfamily members. These mutants comprise one or more amino acid  
CC substitutions in the base region of the finger 2 subdomain, and a C-  
CC terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
CC 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an  
CC amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
CC Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
CC beta superfamily proteins regulate developmental processes and include  
CC proteins such as the osteogenic proteins (OPs), bone morphogenetic  
CC proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors.  
CC Specific examples of TGF-beta superfamily mutants encompassed by the  
CC invention are the finger 2 subdomain mutants of human osteogenic protein-  
CC 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
CC inducing tissue morphogenesis in bone, non-mineralized skeletal tissue,  
CC dental tissue, connective tissue, brain, liver and nerve tissue. The  
CC proteins can be used in conjunction with a biocompatible matrix e.g.,  
CC collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
CC cartilage and/or other mineralized skeletal or connective tissues e.g.,  
CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
CC damaged mammalian tissue and to prevent or substantially inhibit  
CC immune/inflammatory response-mediated tissue damage and scar tissue  
CC formation following an injury. Compared to the wild-type TGF-beta  
CC superfamily members, the mutant proteins have improved in vitro refolding  
CC properties in a pH range of 6-9, increased solubility in aqueous solution  
CC and improved stability and/or activity. The present sequence represents  
CC wild-type human osteogenic protein-1 (OP-1)  
XX

SO Sequence 431 AA;

Query Match 100.0%; Score 111; DB 3; Length 431;

Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNAIS 20  
DB 386 INPETHKPCCAPTQNAIS 405

RESULT 147

AAB09596 ID AAB09596 standard; protein; 431 AA.

XX AAB09596;

DT 11-SEP-2000 (first entry)

DE Human OP-1 mutant protein R421D.

KM Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
KM transforming growth factor-beta; developmental regulation;  
KM finger 2 subdomain; basic region; protein refolding; stability;  
KM solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
KM connective tissue; cartilage; vunerary; mutant; mteuin.

XX Homo sapiens.

OS Synthetic.

XX WO200020607-A2.

PD 13-Apr-2000.

PF 07-OCT-1999; 99WO-US023371.  
XX 07-OCT-1998; 98US-0103418P.  
PR 16-AUG-1999; 99US-00374958.  
XX  
XX (STYC) STYXER CORP.  
PI Opermann H, Tai M, Mccartney J;  
XX WPI; 2000-303787/26.  
XX

PT Transforming growth factor-beta superfamily member mutant induces tissue  
PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
PT tissue and connective tissue and comprises a substitution in a region of  
PT the finger 2 domain.  
XX  
XX  
PS Claim 2; Page 162pp; English.

CC The invention relates to mutant TGF-beta (transforming growth factor-  
CC beta) superfamily members. These mutants comprise one or more amino acid  
CC substitutions in the base region of the finger 2 subdomain, and a C-  
CC terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
CC 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an  
CC amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
CC Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
CC beta superfamily proteins regulate developmental processes and include  
CC proteins such as the osteogenic proteins (OPs), bone morphogenetic  
CC proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors.  
CC Specific examples of TGF-beta superfamily mutants encompassed by the  
CC invention are the finger 2 subdomain mutants of human osteogenic protein-  
CC 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
CC inducing tissue morphogenesis in bone, non-mineralized skeletal tissue,  
CC dental tissue, connective tissue, brain, liver and nerve tissue. The  
CC proteins can be used in conjunction with a biocompatible matrix e.g.,  
CC collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
CC cartilage and/or other mineralized skeletal or connective tissues e.g.,  
CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
CC damaged mammalian tissue and to prevent or substantially inhibit  
CC immune/inflammatory response-mediated tissue damage and scar tissue  
CC formation following an injury. Compared to the wild-type TGF-beta  
CC superfamily members, the mutant proteins have improved in vitro refolding  
CC properties in a pH range of 6-9, increased solubility in aqueous solution  
CC and improved stability and/or activity. Sequences AAB09547-B09548 and  
CC AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
CC protein-1 (OP-1). Note: The present sequence is not shown in the  
CC specification, but is derived from the wild-type human OP-1 sequence  
CC given on page 138-139  
XX

SO Sequence 431 AA;

Query Match 100.0%; Score 111; DB 3; Length 431;

Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNAIS 20  
DB 386 INPETHKPCCAPTQNAIS 405

RESULT 148

AAB09607 ID AAB09607 standard; protein; 431 AA.

XX AAB09607;

DT 11-SEP-2000 (first entry)

DE Human OP-1 mutant protein R421S.

KM Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
KM transforming growth factor-beta; developmental regulation;  
KM finger 2 subdomain; basic region; protein refolding; stability;

XX	AA809615;
XX	
AC	
XX	
DT	11-SEP-2000 (first entry)
XX	
DE	Human OP-1 mutant protein R426T.
XX	
KW	Osteogenic protein-1; OP-1; human; TGF-beta superfamily;
KV	transforming growth factor-beta; developmental regulation;
KW	finger 2 subdomain; basic region; protein refolding; stability;
KM	solubility; tissue morphogenesis; regeneration; bone; dental tissue;
KX	connective tissue; cartilage; vulnary; mutant; mucin.
XX	
OS	Homo sapiens.
OS	Synthetic.
XX	
PN	WO200020607-A2.
FD	
XX	13-APR-2000.
PF	
XX	07-OCT-1999; 99WO-USO23371.
PR	
XX	07-OCT-1998; 98US-0103418P.
PR	16-AUG-1999; 99US-00374958.
XX	
PA	(STYC ) STRYKER CORP.
PI	
XX	Oppermann H, Tai M, McCartney J;
DR	WPI; 2000-303787/26.
XX	
PT	Transforming growth factor-beta superfamily member mutant induces tissue
PT	morphogenesis in e.g. bone, non-mineralized skeletal tissue; dental
PT	tissue and connective tissue and comprises a substitution in a region of
PT	the finger 2 domain.
XX	
PS	Claim 23; Page; 162pp; English.
XX	
CC	The invention relates to mutant TGF-beta (transforming growth factor-
CC	beta) superfamily members. These mutants comprise one or more amino acid
CC	substitutions in the base region of the finger 2 subdomain, and a C-
CC	terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger
CC	2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an
CC	amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,
CC	Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-
CC	beta superfamily proteins regulate developmental processes and include
CC	proteins such as the osteogenic proteins (OPs), bone morphogenetic
CC	proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors.
CC	Specific examples of TGF-beta superfamily mutants encompassed by the
CC	invention are the finger 2 subdomain mutants of human osteogenic protein-
CC	1 (OP-1) (AA809576-B09615). Mutant TGF-beta proteins are used for
CC	inducing tissue morphogenesis in bone, non-mineralised skeletal tissue,
CC	dental tissue, connective tissue, brain, liver and nerve tissue. The
CC	proteins can be used in conjunction with a biocompatible matrix e.g.,
CC	collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,
CC	cartilage and/or other mineralised skeletal or connective tissues e.g.,
CC	ligament, tendon, muscle, fibrocartilage, joint capsule and
CC	intervertebral discs. The OP-1 mutants can be used to repair diseased or
CC	damaged mammalian tissue and to prevent or substantially inhibit
CC	immune/inflammatory response-mediated tissue damage and scar tissue
CC	formation following an injury. Compared to the wild-type TGF-beta
CC	superfamily members, the mutant proteins have improved in vitro refolding
CC	properties in a pH range of 6-9, increased solubility in aqueous solution
CC	and improved stability and/or activity. Sequences AA809547-B09548 and
CC	AA809576-B09615 represent mutant or chimeric forms of human osteogenic
CC	protein-1 (OP-1). Note: The present sequence is not shown in the
CC	specification, but is derived from the wild-type human OP-1 sequence
CC	given on page 138-139
XX	
SO	Sequence 431 AA:
Query Match	100.0%; Score 111; DB 3; Length 431;
Best Local Similarity	100.0%; Pzed. No. 1.8e-06;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHPKPCAPPTOLNAIS 20  
 |||||  
 Db 386 INPETHPKPCAPPTOLNAIS 405

## RESULT 150

AAB09576  
 ID AAB09576 standard; protein; 431 AA.

XX AAB09576;  
 XX  
 DT 11-SEP-2000 (first entry)  
 XX

DE Human OP-1 mutant protein H2177.

XX Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
 KM transforming growth factor-beta; developmental regulation;  
 KM finger 2 subdomain; basic region; protein refolding; stability;  
 KM solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
 KM connective tissue; cartilage; vulnary; mutant; mutein.

OS Homo sapiens.  
 OS Synthetic.

XX WO200020607-A2.

PD 13-APR-2000.

XX 07-OCT-1999; 99WO-US023371.

XX 07-OCT-1998; 98US-0103418P.

PR 16-AUG-1999; 99US-00374958.

XX (STYC) STRYKER CORP.

PI Oppermann H, Tai M, McCartney J;

XX WPI; 2000-303787/26.

PT Transforming growth factor-beta superfamily member mutant induces tissue  
 morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
 tissue and connective tissue and comprises a substitution in a region of  
 the finger 2 domain.

XX Disclosure; Page; 162pp; English.

XX The invention relates to mutant TGF-beta (transforming growth factor-  
 beta) superfamily members. These mutants comprise one or more amino acid  
 substitutions in the base region of the finger 2 subdomain, and a C-  
 terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an  
 amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
 Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
 beta superfamily proteins regulate developmental processes and include  
 proteins such as the osteogenic proteins (OPs), bone morphogenetic  
 proteins (BMPs), growth/differentiation factors (GDFs) and inhibins.  
 Specific examples of TGF-beta superfamily mutants encompassed by the  
 invention are the finger 2 subdomain mutants of human osteogenic protein-  
 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
 inducing tissue morphogenesis in bone, non-mineralized skeletal tissue,  
 dental tissue, connective tissue, brain, liver and nerve tissue. The  
 proteins can be used in conjunction with a biocompatible matrix e.g.,  
 collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
 cartilage and/or other mineralized skeletal or connective tissues e.g.,  
 ligament, tendon, muscle, fibrocartilage, joint capsule and  
 intervertebral discs. The OP-1 mutants can be used to repair diseased or  
 damaged mammalian tissue and to prevent or substantially inhibit  
 immune/inflammatory response-mediated tissue damage and scar tissue  
 formation following an injury. Compared to the wild-type TGF-beta  
 superfamily members, the mutant proteins have improved in vitro refolding  
 properties in a pH range of 6-9, increased solubility in aqueous solution

CC and improved stability and/or activity. Sequences AAB09547-B09548 and  
 CC AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
 protein-1 (OP-1). Note: The present sequence is not shown in the  
 CC specification, but is derived from the wild-type human OP-1 sequence  
 CC given on page 138-139  
 XX

SC Sequence 431 AA;

Query Match 100.0%; Score 111; DB 3; Length 431;  
 Best Local Similarity 100.0%; Pred. NO. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCAPPTOLNAIS 20  
 |||||  
 Db 386 INPETHPKPCAPPTOLNAIS 405

RESULT 151  
 AAB09597  
 ID AAB09597 standard; protein; 431 AA.

XX AAB09597;  
 XX

DT 11-SEP-2000 (first entry)  
 XX

DE Human OP-1 mutant protein N422D.

XX Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
 KM transforming growth factor-beta; developmental regulation;  
 KM finger 2 subdomain; basic region; protein refolding; stability;  
 KM solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
 KM connective tissue; cartilage; vulnary; mutant; mutein.

OS Homo sapiens.  
 OS Synthetic.

XX WO200020607-A2.

PD 13-APR-2000.

XX 07-OCT-1999; 99WO-US023371.

XX 07-OCT-1998; 98US-0103418P.

PR 16-AUG-1999; 99US-00374958.

XX (STYC) STRYKER CORP.

PI Oppermann H, Tai M, McCartney J;

XX WPI; 2000-303787/26.

PT Transforming growth factor-beta superfamily member mutant induces tissue  
 morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
 tissue and connective tissue and comprises a substitution in a region of  
 the finger 2 domain.

XX Claim 22; Page; 162pp; English.

XX The invention relates to mutant TGF-beta (transforming growth factor-  
 beta) superfamily members. These mutants comprise one or more amino acid  
 substitutions in the base region of the finger 2 subdomain, and a C-  
 terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an  
 amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
 Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
 beta superfamily proteins regulate developmental processes and include  
 proteins such as the osteogenic proteins (OPs), bone morphogenetic  
 proteins (BMPs), growth/differentiation factors (GDFs) and inhibins.  
 Specific examples of TGF-beta superfamily mutants encompassed by the  
 invention are the finger 2 subdomain mutants of human osteogenic protein-  
 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
 inducing tissue morphogenesis in bone, non-mineralized skeletal tissue,  
 dental tissue, connective tissue, brain, liver and nerve tissue. The

CC proteins can be used in conjunction with a biocompatible matrix e.g.,  
CC collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
CC cartilage and/or other mineralised skeletal or connective tissues e.g.,  
CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
CC damaged mammalian tissue and to prevent or substantially inhibit  
CC immune/inflammatory response-mediated tissue damage and scar tissue  
CC formation following an injury. Compared to the wild-type TGF-beta  
CC superfamily members, the mutant proteins have improved in vitro refolding  
CC properties in a pH range of 6-9, increased solubility in aqueous solution  
CC and improved stability and/or activity. Sequences AAB09547-B09548 and  
CC AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
CC protein-1 (OP-1). Note: The present sequence is not shown in the  
CC specification, but is derived from the wild-type human OP-1 sequence  
CC given on page 138-139

SO Sequence 431 AA;  
Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHPKPCCAPTOLNAIS 20  
| | | | | | | | | | | | | | | | | | | | | |  
Db 386 INPETHPKPCCAPTOLNAIS 405

RESULT 152  
AAB09609  
ID AAB09609 standard; protein; 431 AA.  
XX  
AC AAB09609;  
XX  
DT 11-SEP-2000 (first entry)  
XX  
DE Human OP-1 mutant protein R426S.  
XX  
KW Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
KW transforming growth factor-beta; developmental regulation;  
KW finger 2 subdomain; basic region; protein refolding; stability;  
KW solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
KW connective tissue; cartilage; vulnery; mutant; mutein.  
XX  
OS Homo sapiens.  
OS Synthetic.  
XX  
PN WO200020607-A2.  
XX  
PD 13-APR-2000.  
XX  
PE 07-OCT-1999; 99WO-US023371.  
XX  
PR 07-OCT-1998; 98US-0103418P.  
PR 16-AUG-1999; 99US-00374958.  
XX  
PA (STYC ) STRYKER CORP.  
XX  
PI Oppermann H, Tai M, McCartney J;  
XX  
DR WPI; 2000-303787/26.  
XX  
XX Transforming growth factor-beta superfamily member mutant induces tissue  
PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
PT tissue and connective tissue and comprises a substitution in a region of  
PT the finger 2 domain.  
XX  
PS Claim 23; Page; 162pp; English.  
XX  
CC The invention relates to mutant TGF-beta (transforming growth factor-  
CC beta) superfamily members. These mutants comprise one or more amino acid  
CC substitutions in the base region of the finger 2 subdomain, and a C-  
CC terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
CC 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an

CC amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
CC Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
CC beta superfamily proteins regulate developmental processes and include  
CC proteins such as the osteogenic proteins (Ops), bone morphogenetic  
CC proteins (Bmps), growth/differentiation factors (GDFs) and inhibitors.  
CC Specific examples of TGF-beta superfamily mutants encompassed by the  
CC invention are the finger 2 subdomain mutants of human osteogenic protein-  
CC 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
CC inducing tissue morphogenesis in bone, non-mineralized skeletal tissue,  
CC dental tissue, connective tissue, brain, liver and nerve tissue. The  
CC proteins can be used in conjunction with a biocompatible matrix e.g.,  
CC collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
CC cartilage and/or other mineralised skeletal or connective tissues e.g.,  
CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
CC damaged mammalian tissue and to prevent or substantially inhibit  
CC immune/inflammatory response-mediated tissue damage and scar tissue  
CC formation following an injury. Compared to the wild-type TGF-beta  
CC superfamily members, the mutant proteins have improved in vitro refolding  
CC properties in a pH range of 6-9, increased solubility in aqueous solution  
CC and improved stability and/or activity. Sequences AAB09547-B09548 and  
CC AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
CC protein-1 (OP-1). Note: The present sequence is not shown in the  
CC specification, but is derived from the wild-type human OP-1 sequence  
CC given on page 138-139

SO Sequence 431 AA;  
Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHPKPCCAPTOLNAIS 20  
| | | | | | | | | | | | | | | | | | | | | |  
Db 386 INPETHPKPCCAPTOLNAIS 405

RESULT 153  
AAB09579  
ID AAB09579 standard; protein; 431 AA.  
XX  
AC AAB09579;  
XX  
DT 11-SEP-2000 (first entry)  
XX  
DE Human OP-1 mutant protein H2247.  
XX  
KW Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
KW transforming growth factor-beta; developmental regulation;  
KW finger 2 subdomain; basic region; protein refolding; stability;  
KW solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
KW connective tissue; cartilage; vulnery; mutant; mutein.  
XX  
OS Homo sapiens.  
OS Synthetic.  
XX  
PN WO200020607-A2.  
XX  
PD 13-APR-2000.  
XX  
PE 07-OCT-1999; 99WO-US023371.  
XX  
PR 07-OCT-1998; 98US-0103418P.  
PR 16-AUG-1999; 99US-00374958.  
XX  
PA (STYC ) STRYKER CORP.  
XX  
PI Oppermann H, Tai M, McCartney J;  
XX  
DR WPI; 2000-303787/26.  
XX  
XX Transforming growth factor-beta superfamily member mutant induces tissue  
PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental



OS Homo sapiens.  
 OS Synthetic.  
 PN WO200020607-A2.  
 PD 13-APR-2000.  
 XX  
 PF 07-OCT-1999; 99WO-US023371.  
 PR 07-OCT-1998; 98US-0103418P.  
 PR 16-AUG-1999; 99US-00374958.  
 PA (STRYKER ) STRYKER CORP.  
 PI Oppermann H, Tai M, Mcartney J;  
 DR WPI; 2000-303787/26.  
 XX  
 PT Transforming growth factor-beta superfamily member mutant induces tissue  
 PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
 PT tissue and connective tissue and comprises a substitution in a region of  
 PT the finger 2 domain.  
 PS  
 PS Claim 23; Page; 162pp; English.  
 CC The invention relates to mutant TGF-beta (transforming growth factor-  
 CC beta) superfamily members. These mutants comprise one or more amino acid  
 CC substitutions in the base region of the finger 2 subdomain, and a C-  
 CC terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
 CC 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an  
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 CC Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
 CC beta superfamily proteins regulate developmental processes and include  
 CC proteins such as the osteogenic proteins (OPs), bone morphogenetic  
 CC proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors.  
 CC Specific examples of TGF-beta superfamily mutants encompassed by the  
 CC invention are the finger 2 subdomain mutants of human osteogenic protein-  
 CC 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
 CC inducing tissue morphogenesis in bone, non-mineralized skeletal tissue,  
 CC dental tissue, connective tissue, brain, liver and nerve tissue. The  
 CC proteins can be used in conjunction with a biocompatible matrix e.g.,  
 CC collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
 CC cartilage and/or other mineralized skeletal or connective tissues e.g.,  
 CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
 CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
 CC damaged mammalian tissue and to prevent or substantially inhibit  
 CC immune/inflammatory response-mediated tissue damage and scar tissue  
 CC formation following an injury. Compared to the wild-type TGF-beta  
 CC superfamily members, the mutant proteins have improved in vitro refolding  
 CC properties in a pH range of 6-9, increased solubility in aqueous solution  
 CC and improved stability and/or activity. Sequences AAB09547-B09548 and  
 CC AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
 CC protein-1 (OP-1). Note: The present sequence is not shown in the  
 CC specification, but is derived from the wild-type human OP-1 sequence  
 CC given on page 138-139  
 CC  
 SO Sequence 431 AA;  
 Query Match 100.0%; Score 111; DB 3; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 Oy 1 INPETHKPCCAPTQLNAIS 20  
 Db 386 INPETHKPCCAPTQLNAIS 405  
 RESULT 156  
 AAB09603  
 ID AAB09603 standard; protein; 431 AA.  
 XX  
 AC AAB09603;  
 XX

DT 11-SEP-2000 (first entry)  
 XX  
 DE Human OP-1 mutant protein M422E.  
 XX  
 KW Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
 KW transforming growth factor-beta; developmental regulation;  
 KW finger 2 subdomain; basic region; protein refolding; stability;  
 KW solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
 KW connective tissue; cartilage; vulnery; mutant; mutein.  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 PN WO200020607-A2.  
 PD 13-APR-2000.  
 XX  
 PF 07-OCT-1999; 99WO-US023371.  
 PR 07-OCT-1998; 98US-0103418P.  
 PR 16-AUG-1999; 99US-00374958.  
 PA (STRYKER ) STRYKER CORP.  
 PI Oppermann H, Tai M, Mcartney J;  
 DR WPI; 2000-303787/26.  
 XX  
 PT Transforming growth factor-beta superfamily member mutant induces tissue  
 PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
 PT tissue and connective tissue and comprises a substitution in a region of  
 PT the finger 2 domain.  
 PS  
 PS Claim 22; Page; 162pp; English.  
 CC The invention relates to mutant TGF-beta (transforming growth factor-  
 CC beta) superfamily members. These mutants comprise one or more amino acid  
 CC substitutions in the base region of the finger 2 subdomain, and a C-  
 CC terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
 CC 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an  
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 CC Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
 CC beta superfamily proteins regulate developmental processes and include  
 CC proteins such as the osteogenic proteins (OPs), bone morphogenetic  
 CC proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors.  
 CC Specific examples of TGF-beta superfamily mutants encompassed by the  
 CC invention are the finger 2 subdomain mutants of human osteogenic protein-  
 CC 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
 CC inducing tissue morphogenesis in bone, non-mineralized skeletal tissue,  
 CC dental tissue, connective tissue, brain, liver and nerve tissue. The  
 CC proteins can be used in conjunction with a biocompatible matrix e.g.,  
 CC collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
 CC cartilage and/or other mineralized skeletal or connective tissues e.g.,  
 CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
 CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
 CC damaged mammalian tissue and to prevent or substantially inhibit  
 CC immune/inflammatory response-mediated tissue damage and scar tissue  
 CC formation following an injury. Compared to the wild-type TGF-beta  
 CC superfamily members, the mutant proteins have improved in vitro refolding  
 CC properties in a pH range of 6-9, increased solubility in aqueous solution  
 CC and improved stability and/or activity. Sequences AAB09547-B09548 and  
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 CC protein-1 (OP-1). Note: The present sequence is not shown in the  
 CC specification, but is derived from the wild-type human OP-1 sequence  
 CC given on page 138-139  
 CC  
 SO Sequence 431 AA;  
 Query Match 100.0%; Score 111; DB 3; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 Oy 1 INPETHKPCCAPTQLNAIS 20

Db 386 INPETHKPCCAPTOLNMAIS 405

RESULT 157

AAB09582 AAB09582 standard; protein; 431 AA.

AC AAB09582;

DT 11-SEP-2000 (first entry)

DE Human OP-1 mutant protein H2234.

KW Osteogenic protein-1; OP-1; human; TGF-beta superfamily;

KW transforming growth factor-beta; developmental regulation;

KW finger 2 subdomain; basic region; protein refolding; stability;

KW solubility; tissue morphogenesis; regeneration; bone; dental tissue;

KW connective tissue; cartilage; vulnery; mutant; murein.

OS Homo sapiens.

OS Synthetic.

PN WO200020607-A2.

PD 13-APR-2000.

PF 07-OCT-1999; 99WO-US023371.

PR 07-OCT-1998; 98US-0103418P.

PR 16-AUG-1999; 99US-00374958.

PA (STYC) STRYKER CORP.

PI Oppermann H, Tai M, McCartney J;

PP WPI; 2000-303787/26.

PT Transforming growth factor-beta superfamily member mutant induces tissue

PT morphogenesis in e.g. bone, non-mineralized skeletal tissue; dental

PT tissue and connective tissue and comprises a substitution in a region of

PT the finger 2 domain.

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CC specification, but is derived from the wild-type human OP-1 sequence

CC given on page 138-139

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CC specification, but is derived from the wild-type human OP-1 sequence

CC given on page 138-139

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Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNMAIS 20  
Db 386 INPETHKPCCAPTOLNMAIS 405

RESULT 158

AAB09583 AAB09583 standard; protein; 431 AA.

AC AAB09583;

DT 11-SEP-2000 (first entry)

DE Human OP-1 mutant protein H2233.

KW Osteogenic protein-1; OP-1; human; TGF-beta superfamily;

KW transforming growth factor-beta; developmental regulation;

KW finger 2 subdomain; basic region; protein refolding; stability;

KW solubility; tissue morphogenesis; regeneration; bone; dental tissue;

KW connective tissue; cartilage; vulnery; mutant; murein.

OS Homo sapiens.

OS Synthetic.

PN WO200020607-A2.

PD 13-APR-2000.

PF 07-OCT-1999; 99WO-US023371.

PR 07-OCT-1998; 98US-0103418P.

PR 16-AUG-1999; 99US-00374958.

PA (STYC) STRYKER CORP.

PI Oppermann H, Tai M, McCartney J;

PP WPI; 2000-303787/26.

PT Transforming growth factor-beta superfamily member mutant induces tissue

PT morphogenesis in e.g. bone, non-mineralized skeletal tissue; dental

PT tissue and connective tissue and comprises a substitution in a region of

PT the finger 2 domain.

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Disclosure; Page; 162pp; English.

The invention relates to mutant TGF-beta (transforming growth factor-beta) superfamily members. These mutants comprise one or more amino acid substitutions in the base region of the finger 2 subdomain, and a C-terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g., Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-beta superfamily proteins regulate developmental processes and include proteins such as the osteogenic proteins (OPs), bone morphogenetic proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors. Specific examples of TGF-beta superfamily mutants encompassed by the invention are the finger 2 subdomain mutants of human osteogenic protein-1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for inducing tissue morphogenesis in bone, non-mineralized skeletal tissue, dental tissue, connective tissue, brain, liver and nerve tissue. The proteins can be used in conjunction with a biocompatible matrix e.g., collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone, cartilage and/or other mineralized skeletal or connective tissues e.g.,



CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
 CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
 CC damaged mammalian tissue and to prevent or substantially inhibit  
 CC immune/inflammatory response-mediated tissue damage and scar tissue  
 CC formation following an injury. Compared to the wild-type TGF-beta  
 CC superfamily members, the mutant proteins have improved in vitro refolding  
 CC properties in a pH range of 6-9, increased solubility in aqueous solution  
 CC and improved stability and/or activity. Sequences AAB09547-B09548 and  
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 CC protein-1 (OP-1). Note: The present sequence is not shown in the  
 CC specification, but is derived from the wild-type human OP-1 sequence  
 CC given on page 138-139

XX  
 SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 3; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALIS 20  
 DB 386 INPETHKPCCAPTQLNALIS 405

RESULT 159  
 AAB09602  
 ID AAB09602 standard; protein; 431 AA.  
 XX  
 AC AAB09602;  
 XX  
 DT 11-SEP-2000 (first entry)  
 XX  
 DE Human OP-1 mutant protein R42LE.

XX  
 KW Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
 KW transforming growth factor-beta; developmental regulation;  
 KW finger 2 subdomain; basic region; protein refolding; stability;  
 KW solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
 KW connective tissue; cartilage; vulnery; mutant; mutein.

XX  
 OS Homo sapiens.  
 OS Synthetic.  
 XX  
 PN WO200020607-A2.  
 XX  
 PD 13-APR-2000.  
 XX  
 PF 07-OCT-1999; 99WO-US023371.  
 XX  
 PR 07-OCT-1998; 98US-0103418P.  
 PR 16-AUG-1999; 99US-00374958.  
 XX  
 PA (STRYK ) STRYKER CORP.  
 XX  
 PI Oppermann H, Tai M, McCartney J;  
 XX  
 DR WPI; 2000-303787/26.  
 XX  
 PT Transforming growth factor-beta superfamily member mutant induces tissue  
 PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
 PT tissue and connective tissue and comprises a substitution in a region of  
 PT the finger 2 domain.

XX  
 PS Claim 22; Page; 162pp; English.

XX  
 CC The invention relates to mutant TGF-beta (transforming growth factor-  
 CC beta) superfamily members. These mutants comprise one or more amino acid  
 CC substitutions in the base region of the finger 2 subdomain, and a C-  
 CC terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
 CC 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an  
 CC amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
 CC Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
 CC beta superfamily proteins regulate developmental processes and include

CC proteins such as the osteogenic proteins (OPs), bone morphogenetic  
 CC proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors.  
 CC Specific examples of TGF-beta superfamily mutants encompassed by the  
 CC invention are the finger 2 subdomain mutants of human osteogenic protein-  
 CC 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
 CC inducing tissue morphogenesis in bone, non-mineralized skeletal tissue,  
 CC dental tissue, connective tissue, brain, liver and nerve tissue. The  
 CC proteins can be used in conjunction with a biocompatible matrix e.g.,  
 CC collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
 CC cartilage and/or other mineralized skeletal or connective tissues e.g.,  
 CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
 CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
 CC damaged mammalian tissue and to prevent or substantially inhibit  
 CC immune/inflammatory response-mediated tissue damage and scar tissue  
 CC formation following an injury. Compared to the wild-type TGF-beta  
 CC superfamily members, the mutant proteins have improved in vitro refolding  
 CC properties in a pH range of 6-9, increased solubility in aqueous solution  
 CC and improved stability and/or activity. Sequences AAB09547-B09548 and  
 CC AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
 CC protein-1 (OP-1). Note: The present sequence is not shown in the  
 CC specification, but is derived from the wild-type human OP-1 sequence  
 CC given on page 138-139

XX  
 SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 3; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALIS 20  
 DB 386 INPETHKPCCAPTQLNALIS 405

RESULT 160  
 AAB09614  
 ID AAB09614 standard; protein; 431 AA.  
 XX  
 AC AAB09614;  
 XX  
 DT 11-SEP-2000 (first entry)  
 XX  
 DE Human OP-1 mutant protein M422T.

XX  
 KW Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
 KW transforming growth factor-beta; developmental regulation;  
 KW finger 2 subdomain; basic region; protein refolding; stability;  
 KW solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
 KW connective tissue; cartilage; vulnery; mutant; mutein.

XX  
 OS Homo sapiens.  
 OS Synthetic.  
 XX  
 PN WO200020607-A2.  
 XX  
 PD 13-APR-2000.  
 XX  
 PF 07-OCT-1999; 99WO-US023371.  
 XX  
 PR 07-OCT-1998; 98US-0103418P.  
 PR 16-AUG-1999; 99US-00374958.  
 XX  
 PA (STRYK ) STRYKER CORP.  
 XX  
 PI Oppermann H, Tai M, McCartney J;  
 XX  
 DR WPI; 2000-303787/26.  
 XX  
 PT Transforming growth factor-beta superfamily member mutant induces tissue  
 PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
 PT tissue and connective tissue and comprises a substitution in a region of  
 PT the finger 2 domain.



PS Claim 23; Page; 162pp; English.

XX The invention relates to mutant TGF-beta (transforming growth factor-  
CC beta) superfamily members. These mutants comprise one or more amino acid  
CC substitutions in the base region of the finger 2 subdomain, and a C-  
CC terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
CC 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an  
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CC Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
CC beta superfamily proteins regulate developmental processes and include  
CC proteins such as the osteogenic proteins (OPs), bone morphogenetic  
CC proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors.  
CC Specific examples of TGF-beta superfamily mutants encompassed by the  
CC invention are the finger 2 subdomain mutants of human osteogenic protein-  
CC 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
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CC dental tissue, connective tissue, brain, liver and nerve tissue. The  
CC proteins can be used in conjunction with a biocompatible matrix e.g.,  
CC collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
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CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
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CC damaged mammalian tissue and to prevent or substantially inhibit  
CC immune/inflammatory response-mediated tissue damage and scar tissue  
CC formation following an injury. Compared to the wild-type TGF-beta  
CC superfamily members, the mutant proteins have improved in vitro refolding  
CC properties in a pH range of 6-9, increased solubility in aqueous solution  
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CC AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
CC protein-1 (OP-1). Note: The present sequence is not shown in the  
CC specification, but is derived from the wild-type human OP-1 sequence  
CC given on page 138-139

XX Sequence 431 AA;

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNAIS 20

DB 386 INPETHKPCCAPTQLNAIS 405

RESULT 161

AAB09604 AAB09604 standard; protein; 431 AA.

AC AAB09604;

DT 11-SEP-2000 (first entry)

DE Human OP-1 mutant protein R426E.

XX Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
KW transforming growth factor-beta; developmental regulation;  
KW finger 2 subdomain; basic region; protein refolding; stability;  
KW solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
KW connective tissue; cartilage; vulnery; mutant; murein.

OS Homo sapiens.

OS Synthetic.

PN WO200020607-A2.

PD 13-APR-2000.

PF 07-OCT-1999; 99MO-US023371.

XX 07-OCT-1998; 98US-0103418P.

PR 16-AUG-1999; 99US-00374958.

XX (STYC ) STRYKER CORP.

XX Opermann H, Tai M, Mccartney J;  
XX WPI: 2000-303787/26.

PT Transforming growth factor-beta superfamily member mutant induces tissue  
PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
PT tissue and connective tissue and comprises a substitution in a region of  
PT the finger 2 domain.

PS Claim 22; Page; 162pp; English.

CC The invention relates to mutant TGF-beta (transforming growth factor-  
CC beta) superfamily members. These mutants comprise one or more amino acid  
CC substitutions in the base region of the finger 2 subdomain, and a C-  
CC terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
CC 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an  
CC amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
CC Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
CC beta superfamily proteins regulate developmental processes and include  
CC proteins such as the osteogenic proteins (OPs), bone morphogenetic  
CC proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors.  
CC Specific examples of TGF-beta superfamily mutants encompassed by the  
CC invention are the finger 2 subdomain mutants of human osteogenic protein-  
CC 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
CC inducing tissue morphogenesis in bone, non-mineralized skeletal tissue,  
CC dental tissue, connective tissue, brain, liver and nerve tissue. The  
CC proteins can be used in conjunction with a biocompatible matrix e.g.,  
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CC cartilage and/or other mineralized skeletal or connective tissues e.g.,  
CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
CC damaged mammalian tissue and to prevent or substantially inhibit  
CC immune/inflammatory response-mediated tissue damage and scar tissue  
CC formation following an injury. Compared to the wild-type TGF-beta  
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CC properties in a pH range of 6-9, increased solubility in aqueous solution  
CC and improved stability and/or activity. Sequences AAB09547-B09548 and  
CC AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
CC protein-1 (OP-1). Note: The present sequence is not shown in the  
CC specification, but is derived from the wild-type human OP-1 sequence  
CC given on page 138-139

SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNAIS 20

DB 386 INPETHKPCCAPTQLNAIS 405

RESULT 162

AA92442 AAY92442 standard; protein; 431 AA.

AC AAY92442;

DT 10-AUG-2000 (first entry)

DE Human osteogenic protein 1 (OP-1).

XX Osteogenic protein; OPX; seven-cysteine domain; osteogenic;  
KW chondrogenic; osteopathic; implant; transplantation.

OS Homo sapiens.

PH Key Location/Qualifiers

FT Domain 330..431  
XX /label=C-terminal\_7-cysteine\_domain

PN WO200020021-A1.  
 XX 13-APR-2000.  
 XX  
 PF 30-JUL-1999; 99WO-US017222.  
 XX  
 PR 06-OCT-1998; 98US-0103161P.  
 XX  
 PA (STRYKER) STRYKER CORP.  
 PI Vukicevic S, Katic V, Sampath KT;  
 DR WPI, 2000-317644/27.  
 DR N-PSDB; AAA09361.  
 XX  
 PT Novel methods for repairing a defect in mammalian nonarticular cartilage tissue or ligaments using an osteogenic protein in a biocompatible, bioreabsorbable carrier.  
 PT  
 PS Disclosure; Page 55-56; 65pp; English.  
 XX  
 CC The specification concerns a novel method for repairing a defect in a non-articular cartilage tissue or a ligament of a mammal, which comprises providing an osteogenic protein in a biocompatible, bioreabsorbable carrier to the defect locus to induce the formation of functional replacement cartilage. The methods and implants, promote chondrogenesis and are useful for repairing or correcting a defect in a non-articular cartilage tissue or a ligament of a mammal, e.g. cleft larynx, oedema of the glottis, ulceration of the larynx caused by syphilis, tuberculous or malignancy, defects resulting from mechanical trauma to the larynx or trachea (including tracheotomy and laryngotomy), laryngeal cancer, and defects of the ear, nose, ribs, intervertebral discs, and interarticular menisci.  
 CC  
 CC  
 SQ Sequence 431 AA;  
 XX  
 Query Match 100.0%; Score 111; DB 3; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHVPCPCAPTQNLNALS 20  
 DB 386 INPETHVPCPCAPTQNLNALS 405  
 RESULT 163  
 AAY82158  
 ID AAY82158 standard; protein; 431 AA.  
 AC AAY82158;  
 XX  
 DT 07-JUN-2000 (first entry)  
 XX  
 DE Human osteogenic protein OPl SEQ ID NO:2.  
 XX  
 KW Human; osteogenic protein; OPl; OPx; matrix; skeletal joint; bone;  
 KW articular cartilage; replacement body part.  
 XX  
 OS Homo sapiens.  
 XX  
 PN US6027743-A.  
 XX  
 PD 22-FEB-2000.  
 XX  
 PF 02-JUN-1995; 95US-00458811.  
 XX  
 PR 03-JUN-1994; 94US-00253398.  
 XX  
 PA (STRYKER) STRYKER CORP.  
 PI Sampath KT, Rueger DC, Khouri RK;  
 DR WPI, 2000-222942/19.

DR N-PSDB; AA295567.  
 XX  
 XX In vivo manufacture of autologous replacement body parts for replacing skeletal joints.  
 PT  
 XX  
 PS Example 1; Col 27-30; 21pp; English.  
 CC  
 CC The present invention describes devices (I) and methods (II) for the manufacture in vivo of autogenous replacement body parts (especially skeletal joints) comprising a number of distinct tissues. (I) and (II) are used for the manufacture in vivo of autogenous replacement body parts (especially skeletal joints) comprising a number of distinct tissues. The use of (I) results in the formation of mechanically and functionally viable tissues normally present at the site. These tissues are of an appropriate size and have correct structural relationships to result in the formation of a functional body part. In particular, the multi-tissue replacement part whether produced in situ at the site of intended use or remotely, becomes incorporated, integrating with adjacent tissues, essentially maintaining its shape and avoiding abnormal reabsorption, regardless of the conditions present at the recipient site. The devices are capable of being precisely contoured and shaped to exactly match any defect however complex the organ or organ shape it is used to replace. The devices have virtually unlimited supply and are easy to obtain. The devices have minimal donor site morbidity. The present sequence represents the human osteogenic protein OPl, which is used in the exemplification of the present invention  
 CC  
 CC  
 SQ Sequence 431 AA;  
 XX  
 Query Match 100.0%; Score 111; DB 3; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHVPCPCAPTQNLNALS 20  
 DB 386 INPETHVPCPCAPTQNLNALS 405  
 RESULT 164  
 AAY57229  
 ID AAY57229 standard; protein; 431 AA.  
 AC AAY57229;  
 XX  
 DT 06-MAR-2000 (first entry)  
 XX  
 DE Human osteogenic protein (hOP-1).  
 XX  
 KW Morphogen; bone formation; modulation; endochondral; OP-1; OP-2; DPP; transforming growth factor; TGF-beta; osteogenic protein; BMP2; Vgr-1; GDF-1; 60A protein; screening assay; therapeutic; cell death.  
 XX  
 OS Homo sapiens.  
 XX  
 PN US5994131-A.  
 XX  
 PD 30-NOV-1999.  
 XX  
 PF 15-AUG-1997; 97US-00912088.  
 XX  
 PR 11-MAR-1991; 91US-00667274.  
 PR 30-AUG-1991; 91US-00752764.  
 PR 30-AUG-1991; 91US-00752861.  
 PR 28-AUG-1992; 92US-00938021.  
 PR 20-JUL-1994; 94US-00278729.  
 PR 26-MAY-1995; 95US-00451953.  
 XX  
 PA (CREA-) CREATIVE BIOMOLECULES INC.  
 XX  
 PI Smart JE, Oppertman H, Kuberassampath T, Rueger DC, Pang RHL;  
 PI Cohen CW, Ozkaynak E;  
 DR WPI, 2000-038265/03.

DR N-PSDB; AA239477.  
XX Screening assay useful for identifying compounds which can act to  
PT modulate expression of a morphogen in a mammalian cell.  
XX  
PS Disclosure; Col 45-40; 48pp; English.  
XX

XX The invention provides a method for altering expression of a morphogen in  
CC a mammalian cell with a compound that modulates morphogen expression in  
CC epithelial cells identified in an assay for bone formation. The method  
CC uses a protein that induces endochondral bone formation such as OP-1, a  
CC morphogenic protein which is a member of the transforming growth factor  
CC (TGF-beta) superfamily. Other morphogens useful in the invention are  
CC osteogenic proteins (OP-1, OP-2 and BMP2) and related proteins such as  
CC DPP, Vgr-1, GDF-1 and the 60A protein. The method is used as a screening  
CC assay for identifying compounds which modulate the level of expression of  
CC a morphogen. The method allows the determination of substances useful in  
CC therapeutic treatments to modulate (stimulate or depress) morphogen  
CC expression and/or secretion in disease treatment. Compounds can be  
CC screened for their ability to modulate the effective systemic or local  
CC concentration of a morphogen. Compounds which can be screened include  
CC chemicals, biological response molecules such as lymphokines, cytokines,  
CC hormones or vitamins, plant extracts, microbial broths and extract  
CC mediums conditioned by eukaryotic cells, body fluids or tissue extracts.  
CC The assay has few steps and is easy to carry out producing results  
CC quickly. Drugs which result in cell death are easy to identify  
XX

XX Sequence 431 AA;

XX Query Match 100.0%; Score 111; DB 3; Length 431;  
XX Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 165

AA02784 AAB02784 standard; protein; 431 AA.

XX AAB02784;

XX 22-AUG-2000 (first entry)

XX Human morphogenic protein OP-1 protein SEQ ID NO:39.

XX Tumour growth factor beta; TGF-beta; morphogenic protein; BMP; OP;  
XX bone morphogenic protein; osteogenic protein; mutant; modified;  
XX finger 2 subdomain; finger 1 domain; heel domain; chimeric protein;  
XX osteogenic; proliferative; antiinflammatory; tissue morphogenesis;  
XX tissue repair; regeneration; proliferation; differentiation.  
XX

XX Homo sapiens.

XX WO2000020591-A2.

XX 13-APR-2000.

XX 07-OCT-1999; 99WO-US023370.

XX 07-OCT-1998; 98US-0103418P.

XX 16-AUG-1999; 99US-00374936.

XX (STRYK) STRYKER CORP.

XX Oppermann H, Tai M, McCartney J;

XX WPI; 2000-303776/26.

XX Novel TGF-beta superfamily mutant chimeric protein, useful for inducing  
XX tissue morphogenesis in e.g. bone, comprises a dimer consisting of one

PT monomer containing domains from two family members.

XX Claim 2; Page 125-126; 149pp; English.

XX The present invention describes a tumour growth factor beta (TGF-beta)  
XX superfamily chimeric protein (I) derived from at least 2 different  
XX members of the superfamily comprising a dimer with one monomer that  
XX contains a finger 2 domain derived from a first family member and a  
XX finger 1 domain and heel domain, both derived from a second family  
XX member. The monomer further comprises a conserved C-terminal cysteine  
XX skeleton. (I) has osteogenic, proliferative and antiinflammatory  
XX activities. The TGF-beta superfamily chimeric proteins (I) are useful for  
XX inducing tissue morphogenesis (i.e. molecules capable of tissue repair  
XX and regeneration and/or inhibiting inflammation) in bone, non-mineralised  
XX skeletal tissue, dental tissue, connective tissue, brain, liver and nerve  
XX and for inducing the proliferation and differentiation of uncommitted  
XX progenitor cells in a tissue-specific manner to support new tissue  
XX formation. AA29887 to AA29897 and AAB02748 to AAB02824 represent  
XX sequences used in the exemplification of the present invention

XX Sequence 431 AA;

XX Query Match 100.0%; Score 111; DB 3; Length 431;  
XX Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 166

AA97369 AAY97369 standard; protein; 431 AA.

XX AAY97369;

XX 05-SEP-2000 (first entry)

XX Human osteogenic protein OP-1.

XX Human; osteogenic protein; OP-1; morphogen; cell differentiation; cancer;

XX cell growth inhibition; BMP-7.

XX Homo sapiens.

XX WO2000023012-A2.

XX 25-MAY-2000.

XX 12-NOV-1999; 99WO-US026636.

XX 13-NOV-1998; 98US-00191239.

XX (CREA-) CREATIVE BIOMOLECULES INC.

XX Sampath KT, Cohen CM, Rueger DC;

XX WPI; 2000-387615/33.

XX N-PSDB; AAA30332.

XX Administration of a morphogen to treat and alleviate the symptoms of

XX opportunistic infection and pain.

XX Claim 1; Page 69-71; 75pp; English.

XX The present sequence is the human osteogenic protein 1 (OP-1) (also known  
XX as BMP-7). OP-1 is a bone morphogen which induces cellular  
XX differentiation and thus prevents cell proliferation. Morphogens can also  
XX be used to treat cancer, as it has been shown that they can inhibit  
XX tumour cell proliferation as well. The types of cancer include adrenal,  
XX anus, bladder, bone, brain, breast, cervix, colon, corpus, endocrine,

CC oesophageal, Fallopian tube, fat cell, gallbladder and gastrointestinal  
CC tract cancers, germ cell tumours, kidney cancer, leukaemia, liver cancer,  
CC lymphoma, lung, muscle, nervous system, ocular tissue, oral, ovarian,  
CC pancreatic, prostate, rectal, skin, small intestine, soft tissue and  
CC stomach cancers, teratocarcinoma, testicular, thyroid, ureteral, urinary,  
CC uterine and metastatic cancers, the latter of unknown origin. In  
CC addition, OP-1 may be used to alleviate the symptoms of cancer, which  
CC include abnormal bleeding, abnormal bodily function, abnormal cell  
CC morphology, abnormal enzyme levels, abnormal hormone levels, abnormal  
CC oncofetal antigen levels, abnormal tissue growth, abnormal tissue mass,  
CC abnormal tumour-associated protein levels, altered neurologic function,  
CC altered neurologic structure, angiogenesis, diarrhoea, effusions,  
CC fatigue, fever, lesions, malnutrition, metastasis, nausea, obstruction of  
CC a bodily passage, opportunistic infection, pain, poor Karnofsky  
CC performance status, presence of cell-surface, histological cancer,  
CC intracellular and molecular markers, tumour invasion, urinary frequency  
CC and weight loss  
CC  
SQ Sequence 431 AA;  
Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
OY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405  
RESULT 167  
AAB08841  
ID AAB08841 standard; protein; 431 AA.  
XX  
AC AAB08841;  
XX  
DT 02-JAN-2001 (first entry)  
XX  
DE Amino acid sequence of a human osteogenic protein 1 (OP1).  
XX  
KW Human; osteogenic protein 1; OP1; skeletal joint defect; tissue repair;  
XX articular cartilage defect.  
XX  
OS Homo sapiens.  
XX  
PN US6110482-A.  
XX  
PD 29-AUG-2000.  
XX  
PF 02-JUN-1995; 95US-00459129.  
XX  
PR 03-JUN-1994; 94US-00253398.  
XX  
PA (STYC ) STRYKER CORP.  
XX  
PI Sampath KT, Rueger DC, Khouri RK;  
XX  
DR WPI, 2000-571418/53.  
XX  
DR N-PSDB; AAA75039.  
XX  
PT Device for repairing skeletal joint defect in mammals comprises exogenous  
XX osteogenic protein deposited on the surface of a matrix comprising plural  
XX distinct tissues derived from proximal or distal hemei-joint.  
XX  
PS Disclosure; Col 27-30; 21pp; English.  
XX  
XX The present sequence represents a human osteogenic protein 1 (OP1). The  
XX protein is used in devices of the invention. The specification describes  
XX devices for repairing a skeletal joint defect in mammals. The device  
XX comprises exogenous osteogenic protein deposited on the surface of a  
XX biocompatible, biodegradable matrix. The matrix comprises distinct  
XX tissues derived from a proximal or distal hemei-joint. The device serves  
XX as a template to form an in vivo functional skeletal joint replacement  
XX which is long term mechanically and functionally viable. The exogenous

CC OP1 is deposited on the matrix surface to induce formation of new  
CC distinct tissues, and to permit regeneration of a functional skeletal  
CC joint replacement comprising distinct tissues. The devices are useful for  
CC inducing the formation of a functional skeletal joint replacement, and  
CC for repairing an articular cartilage defect occurring in a synovial  
CC cavity in a mammal. They are also useful for repair and regeneration of  
CC distinct tissues at a single defect site in a mammal and for the  
CC manufacture, in vivo, of autogenous replacement body parts comprising  
CC distinct tissues  
CC  
SQ Sequence 431 AA;  
Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
OY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405  
RESULT 168  
AAB50233  
ID AAB50233 standard; protein; 431 AA.  
XX  
AC AAB50233;  
XX  
DT 13-MAR-2001 (first entry)  
XX  
DE Human tissue morphogenesis protein OP-1.  
XX  
KW Human; tissue morphogenesis induction; OP-3; cell differentiation;  
XX redifferentiation; skin disease; blood disorder; transplant.  
XX  
OS Homo sapiens.  
XX  
PN US6153583-A.  
XX  
PD 28-NOV-2000.  
XX  
PF 23-DEC-1998; 98US-00219391.  
XX  
PR 11-MAR-1991; 91US-00667274.  
XX  
PR 30-AUG-1991; 91US-00752764.  
XX  
PR 30-AUG-1991; 91US-00752857.  
XX  
PR 30-AUG-1991; 91US-00752861.  
XX  
PR 30-AUG-1991; 91US-00753059.  
XX  
PR 31-JUL-1992; 92US-00922813.  
XX  
PR 31-JUL-1992; 92US-00923780.  
XX  
PR 28-AUG-1992; 92US-00938021.  
XX  
PR 28-AUG-1992; 92US-00938336.  
XX  
PR 28-AUG-1992; 92US-00938337.  
XX  
PR 15-SEP-1992; 92US-00945285.  
XX  
PR 15-SEP-1992; 92US-00945286.  
XX  
PR 16-SEP-1992; 92US-00946238.  
XX  
PR 03-NOV-1992; 92US-00971009.  
XX  
PR 07-JUN-1995; 95US-00479666.  
XX  
PR 28-JUL-1997; 97US-00901200.  
XX  
PA (STYC ) STRYKER CORP.  
XX  
PI Ozkaynak E, Kuberampath T, Rueger DC, Pang RHL, Cohen CW;  
XX Oppermann H;  
XX  
DR WPI; 2001-069971/08.  
XX  
DR N-PSDB; AAC89688.  
XX  
PT New compositions containing a morphogenetically active fragment of OP-3,  
XX useful for inducing the formation of replacement tissue at a tissue locus  
XX in a mammal, especially useful for replacing diseased or damaged tissue  
XX in a mammal.

PS Disclosure, Col 49-52; 46pp; English.

XX The present invention discloses compositions containing the murine OP-3  
CC protein for use in the induction of tissue formation in a mammal. They  
CC can be used in the replacement of diseased or damaged tissue, to inhibit  
CC the formation of scar tissue, to enhance the viability of transplanted  
CC tissue, to increase progenitor cell populations, in the treatment of  
CC blood disorders, to reduce tissue damage associated with psoriasis and  
CC dermatitis, and in the treatment of tissue disorders where loss of  
CC function is due to ageing, osteoporosis and degenerative diseases; such  
CC as Alzheimer's disease

XX Sequence 431 AA;

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALIS 20  
DB 386 INPETHKPCCAPTQLNALIS 405

RESULT 169  
AAB37614  
ID AAB37614 standard; protein; 431 AA.

XX AAB37614;  
AC 27-FEB-2001 (first entry)

XX Human OP-1.

XX Human; OP-1; contraceptive; antifertility; gynaecological; morphogen;  
KW luteinisation inhibitor; osteogenic protein-1; menopause;  
KW progesterone synthesis; oestrogen synthesis.

XX Homo sapiens.

XX MO200066620-A2.

XX 09-NOV-2000.

XX 28-APR-2000; 2000MO-US011501.

XX 30-APR-1999; 99US-0131721P.

XX 27-APR-2000; 2000US-00561171.

XX (CREA-) CREATIVE BIOMOLECULES INC.

XX Sampath KS;

XX WPI; 2001-024771/03.

XX N-PSDB; AAC83806.

XX Use of morphogen, a luteinization inhibitor, for increasing fertility,  
PT alleviating symptoms of menopause, delaying onset of menopause and for  
PT contraception.

XX Claim 1; Page 62-64; 74pp; English.

XX The present invention relates to a morphogen which is a luteinisation  
CC inhibitor. The morphogen comprises the C-terminal seven-cysteine skeleton  
CC of human osteogenic protein-1 (OP-1). The present sequence is the full-  
CC length OP-1 protein. The morphogen comprises amino acids 330-431 of the  
CC present sequence. The morphogen is useful for increasing fertility, and  
CC alleviating symptoms of menopause, delaying onset of menopause, and  
CC attenuating progesterone synthesis and inducing or increasing oestrogen  
CC synthesis in atretic or healthy ovarian follicles of a subject. Compounds  
CC which interfere with the binding of the morphogen to its receptor are  
XX useful for contraception

XX Sequence 431 AA;

SO

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALIS 20  
DB 386 INPETHKPCCAPTQLNALIS 405

RESULT 170  
AAU09117  
ID AAU09117 standard; protein; 431 AA.

XX AAU09117;  
AC 16-JAN-2002 (first entry)

XX Human morphogenic protein OP-1.

XX Human; morphogenic protein; OP-1; osteogenic protein-1; vulnery;  
KW vasotropic; antiangiogenic; immunosuppressive; osteopathic; cardiac;  
KW angiogenesis; reproduction; wound healing; organ transplantation;  
KW bone repair; ischaemic heart disease; tumour; rheumatoid arthritis;  
KW diabetic retinopathy; myocardial infarction; inflammatory disease; ulcer;  
KW ischaemic peripheral vascular disease; BMP7; bone morphogenic protein;  
KW morphogenic protein stimulatory factor; MSPF.

XX Homo sapiens.

XX Key Location/Qualifiers  
FT 330..431  
FT Domain /label=C\_terminal\_seven\_cysteine\_domain

XX MO200174379-A2.

XX 11-OCT-2001.

XX 23-MAR-2001; 2001MO-US009451.

XX 31-MAR-2000; 2000US-00540466.

XX (STYC) STRYKER CORP.

XX Ripamonti U, Ramosheli LN;

XX WPI; 2001-656972/75.

XX N-PSDB; AAS15216.

XX Inducing angiogenesis in a mammal required in physiological processes and  
PT in treating pathophysiologicals such as reproduction, wound healing,  
PT ischaemic heart disease, by administering a morphogenic protein.

XX Claim 6; Page 77-77; 81pp; English.

XX The invention relates to inducing angiogenesis in a mammal by  
CC administering a morphogenic protein which is not bone morphogenic  
CC protein (BMP)-2 or GDF-5 improving the angiogenic inductive activity of  
CC the morphogenic protein in a mammal by co-administering a morphogenic  
CC protein stimulatory factor (MSPF). The method is useful for inducing  
CC angiogenesis in a mammal required in physiological processes and treating  
CC pathophysiologicals such as reproduction, wound healing, organ  
CC transplantation, bone repair, ischaemic heart disease, ischaemic  
CC peripheral vascular disease, tumours, rheumatoid arthritis, diabetic  
CC retinopathy, myocardial infarction, inflammatory diseases such as ulcers.  
CC The present sequence represents human osteogenic protein, OP-1 (also  
CC known as bone morphogenic protein 7), a morphogenic protein useful in the  
CC method of the invention

XX Sequence 431 AA;

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQTNLAIS 20  
 |||  
 DB 386 INPETHKPCAPQTNLAIS 405

RESULT 171  
 ID AAE00386 standard; protein: 431 AA.  
 AAE00386  
 AC AAE00386;  
 DT 19-JUN-2001 (first entry)  
 XX  
 DE Human osteogenic protein 1 (hOP-1).  
 XX  
 KM Human, osteogenic protein 1; hOP-1; osteopathic; gene therapy; BMP;  
 KM bone morphogenic protein; tissue formation; cell proliferation; SLE;  
 KM systemic lupus erythematosus; jaw bone defect; psoriatic arthritis;  
 KM congenital disease; osteoarthritis; rheumatoid arthritis; tissue disease;  
 KM inflammatory joint disease; ulcerative colitis; Whipple's disease;  
 KM thrombotic thrombocytopenic purpura; bursitis; ankylosing spondylitis;  
 KM rheumatic fever; amyloidosis.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT 330..431  
 FT Domain /label=Seven\_cysteine\_domain  
 FT 335..431  
 FT /label=Six\_cysteine\_domain  
 XX  
 PN WO200123563-A2.  
 XX  
 PD 05-APR-2001.  
 XX  
 PE 27-SEP-2000; 2000WO-US026528.  
 XX  
 PR 27-SEP-1999; 99US-0156261P.  
 XX  
 PA (STRYK) STRYKER CORP.  
 XX  
 PI Lee JC, Yeh LC;  
 XX  
 DR WPI; 2001-266158/27.  
 DR N-PSDB; AAD03656.  
 XX  
 XX  
 PT Improving tissue inductive capability of morphogenic protein at target  
 PT locus in mammal involves administering morphogenic protein with a hormone  
 PT and its soluble receptor, to the target locus.  
 PT  
 PS Claim 30; Page 56-58; 63pp; English.  
 XX  
 CC The present sequence is human osteogenic protein 1 (hOP-1) also referred  
 CC as bone morphogenic protein 7 (BMP-7). The invention relates to a method  
 CC for improving the tissue inductive capability of a morphogenic protein in  
 CC a mammal by administering the morphogenic protein, a hormone, and a  
 CC soluble receptor of the hormone, where the morphogenic protein's  
 CC capability to induce tissue formation when accessible to the progenitor  
 CC cell in the mammal, is enhanced by the hormone-receptor combination. The  
 CC method is useful for improving the tissue inductive capability of a  
 CC morphogenic protein at a target locus e.g. a jaw bone defect such as a  
 CC fracture, a non-union fracture, a critical or non-critical size defect,  
 CC an osteochondral defect, tissue (cartilage or soft tissue or neural  
 CC tissue) degenerative condition, a fusion or a bony void, in a mammal. The  
 CC morphogenic devices are useful for treating tissue injuries, tissue  
 CC degeneration and other tissue diseases, congenital diseases and  
 CC developmental abnormalities of cartilage, bone and other tissues.  
 CC Osteogenic device is useful in the treatment of osteoarthritis. The  
 CC morphogenic compositions and devices are also useful for treating  
 CC inflammatory joint diseases such as rheumatoid and psoriatic arthritis,  
 CC bursitis, ulcerative colitis, SLE-systemic lupus erythematosus, Whipple's

CC disease, ankylosing spondylitis, rheumatic fever, amyloidosis, thrombotic  
 CC thrombocytopenic purpura and relapsing polychondritis

CC  
 XX Sequence 431 AA;  
 SQ

Query Match 100.0%; Score 111; DB 4; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQTNLAIS 20  
 |||  
 DB 386 INPETHKPCAPQTNLAIS 405

RESULT 172  
 ID AAB82695 standard; protein: 431 AA.  
 AAB82695  
 AC AAB82695;  
 DT 15-OCT-2001 (first entry)  
 XX  
 DE Human osteogenic protein OP-1.  
 XX  
 KM Osteogenic protein; OP-1; human; bone; cartilage; fracture;  
 KM osteochondral defect; subchondral defect; degenerative disease;  
 KM osteochondritis desiccans; osteopathy; vulnery; therapy.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT 330..431  
 FT Domain /note="7 cysteine domain, present in osteogenically  
 FT active forms of OP-1"  
 XX  
 PN US2001016646-A1.  
 XX  
 PD 23-AUG-2001.  
 XX  
 PE 20-MAR-1998; 98US-00045331.  
 XX  
 PR 20-MAR-1998; 98US-00045331.  
 XX  
 PA (RUEGER) RUEGER D C.  
 PA (TUCKER) TUCKER M A.  
 PA (CHANV) CHANG A.  
 XX  
 PI Rueger DC, Tucker MA, Chang A;  
 XX  
 DR WPI; 2001-513983/56.  
 DR N-PSDB; AAH26404.  
 XX  
 XX  
 PT Implant for inducing local bone or cartilage formation, comprising  
 PT osteogenic proteins, non-synthetic polymeric matrixes and binding agents.  
 PT  
 PS Disclosure; Page 50-51; 59pp; English.  
 XX  
 CC The present sequence is that of human osteogenic protein OP-1. The  
 CC invention is based on the discovery that admixing osteogenic protein and  
 CC a non-synthetic, non-polymeric matrix such as collagen or beta-tricalcium  
 CC phosphate with a binding agent yields an improved osteogenic device with  
 CC enhanced bone and cartilage repair capabilities. The osteogenic protein  
 CC may be OP-1, OP-2, bone morphogenic protein (BMP)-2, BMP-4, BMP-5, BMP-6,  
 CC BMP-9, BMP-10, BMP-11, BMP-12, BMP-15, BMP-16, DPP, Vg1, Vgr, 60A  
 CC protein, GDF1, GDF3, GDF5, GDF6, GDF7, GDF8, GDF10, GDF11, or their  
 CC variants, and is especially OP-1. The osteogenic devices promote  
 CC accelerated formation of repair tissue with enhanced stability using less  
 CC osteogenic protein than previous devices. Defects susceptible to repair  
 CC include critical size defects, non-critical size defects, non-union  
 CC fractures, fractures, osteochondral defects and subchondral defects  
 CC (claimed), and defects resulting from degenerative diseases such as  
 CC osteochondritis desiccans

SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
|||  
DB 386 INPETHKPCCAPTQLNALS 405

RESULT 173  
AAU97017  
ID AAU97017 standard; protein; 431 AA.

XX AAU97017;

XX 24-SEP-2002 (first entry)

XX Human osteogenic protein (OP-1).

XX Human; osteogenic protein; OP-1; neuroprotective;  
XX anyotropic lateral sclerosis; multiple sclerosis; spinal cord injury;  
XX morphogen; nerve cell adhesion molecule; N-CAM; LI isoform; BMP2B;  
XX motor function; OP-2; 60A; GDF-1; bone morphogenetic protein; BMP2A;  
XX BMP2B; DPP; Vg1; Vgr-1; BMP3; BMP5; BMP6.

XX Homo sapiens.

XX US2002049159-A1.

XX 25-APR-2002.

XX 25-SEP-1997; 97US-00937755.

XX 11-MAR-1991; 91US-00667274.

XX 30-AUG-1991; 91US-00752764.

XX 30-AUG-1991; 91US-00753059.

XX 31-JUL-1992; 92US-00922813.

XX 23-SEP-1993; 94US-00126100.

XX 16-JUN-1994; 94US-00260675.

XX (RUEG/) RUEGER D C.

XX (SAMP/) SAMPATH K T.

XX (OPPE/) OPPELMANN H.

XX (PANG/) PANG R H L.

XX (COHE/) COHEN C M.

XX Rueger DC, Sampath KT, Oppermann H, Pang RHL, Cohen CM;

XX WPI, 2002-415042/44.

XX N-PSDB; ABK51437.

XX New treatment for amyotrophic lateral sclerosis, multiple sclerosis or

XX spinal cord injury comprises administering morphogen which stimulates

XX expression of nerve cell adhesion molecule.

XX Claim 1; Page 33-34; 57pp; English.

XX The invention relates to a method of treating amyotrophic lateral  
XX sclerosis, multiple sclerosis or a spinal cord injury, comprising  
XX administering a morphogen which stimulates production of an nerve cell  
XX adhesion molecule (N-CAM) or LI isoform by an NG108-15 cell in vitro.  
XX Also described is a method of restoring or preserving nerve function in a  
XX mammal afflicted with or at risk from amyotrophic lateral sclerosis,  
XX multiple sclerosis or a spinal cord injury comprising administering a  
XX morphogen which is human osteogenic protein (OP-1), mouse OP-1, human OP-  
XX 2, mouse OP-2, 60A, GDF-1 (undefined), bone morphogenetic protein  
XX (BMP) 2A, BMP2B, DPP (undefined), Vg1 (undefined), Vgr-1, BMP3, BMP5, or  
XX BMP6. The present sequence represents the amino acid sequence of human OP  
XX -1 which was used as a reference sequence to generate generic  
XX polypeptides for use in the method of the invention

SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
|||  
DB 386 INPETHKPCCAPTQLNALS 405

RESULT 174  
AAE25993  
ID AAE25993 standard; protein; 431 AA.

XX AAE25993;

XX 15-NOV-2002 (first entry)

XX Human osteogenic protein 1 (hOP-1).

XX Central nervous system function; morphogen; ischaemia; grasp; trauma;  
XX motor coordination function; posture; balance; sensory perception;  
XX taste proprioception; olfaction; gait; human osteogenic protein 1; hOP-1;  
XX bone morphogenic protein; BMP.

XX Homo sapiens.

XX Key

XX Location/Qualifiers

XX 30..292

XX /label=Pro\_domain

XX 48..292

XX /note="Pro domain fragment"

XX 158..292

XX /note="Pro domain fragment"

XX 330..431

XX /label=C-terminal\_seven\_cysteine\_domain

XX 335..431

XX /label=C-terminal\_six\_cysteine\_domain

XX US6407060-B1.

XX 18-JUN-2002.

XX 21-MAR-1997; 97US-00828281.

XX 22-MAR-1996; 96US-00620444.

XX (CURT-) CURIS INC.

XX Charrette MF, Finklestein SP;

XX WPI, 2002-573260/61.

XX N-PSDB; AAD43021.

XX Method for enhancing recovery of central nervous system function  
XX comprises administration of a morphogen comprising a dimeric protein and  
XX a pair of folded polypeptides to a mammal suffering trauma or ischaemia.

XX Claim 1; Col 37-40; 41pp; English.

XX The invention relates to a method for enhancing recovery of central  
XX nervous system function. The method involves administration of a  
XX morphogen comprising a dimeric protein and a pair of folded polypeptides  
XX to a mammal suffering trauma or ischaemia, where the morphogen is not  
XX transforming growth factor beta (TGF-beta). The method is useful for  
XX enhancing recovery of central nervous system function, i.e. motor  
XX coordination function (e.g. posture, balance, grasp or gait) or sensory  
XX perception (e.g. speech, vision, touch, taste proprioception or  
XX olfaction). The present sequence is human osteogenic protein 1 (hOP-1).  
XX OP-1 also referred as bone morphogenic proteins (BMPs) are classified  
XX under the subgroup of TGF-beta superfamily of growth factors

Sequence 431 AA;  
Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405  
RESULT 175  
AB82416  
ID ABB82416 standard; protein; 431 AA.  
XX  
XX ABB82416;  
AC  
XX  
XX 08-JAN-2003 (first entry)  
DT  
XX  
XX Human osteogenic protein-1 (OP-1).  
DE  
XX TCP; beta-tricalcium phosphate; bone; osteopathic; prosthetic; OP-1;  
KW bone implantation; osteogenic protein; human.  
XX  
XX Homo sapiens.  
OS  
XX W0200270029-A2.  
PN  
XX 12-SEP-2002.  
PD  
XX 26-FEB-2002; 2002WO-US005827.  
PE  
XX 02-MAR-2001; 2001US-00798518.  
PR 21-SEP-2001; 2001US-00960789.  
XX  
XX (STYC) STRYKER CORP.  
XX  
PI Dalal PS, Dimaano GR, Toth CA, Kulkarni SC;  
DR WPI; 2002-740751/80.  
DR N-PSDB; ABV73237.  
XX  
XX Porous beta-tricalcium phosphate material useful for bone implantation in  
PT implantable prosthetic device e.g. hip device, fusion cage or  
PT maxillofacial device, comprises several pores of specific diameter size.  
PT  
XX  
PS Disclosure; Page 143-144; 151pp; English.  
XX  
XX The invention relates to a porous beta-tricalcium phosphate (TCP) that  
CC comprises several pores. The pores are single separate voids having a  
CC pore diameter size of 20 - 500 (preferably 410 - 460, 40 - 190, 20 - 95  
CC or 50 - 125) microm. The beta-TCP induces bone formation, delivers  
CC bioactive agent at a site requiring cartilage formation, improves  
CC osteoconductivity and regeneration of bone tissue in a living body,  
CC repairs a bone defect in a human or animal. The porous beta-TCP granules  
CC are biocompatible and support the development of new bone throughout its  
CC structural form. The beta-TCP can be used in prosthetic device (e.g. hip  
CC device, fusion cage or maxillofacial device). It can be used for bone  
CC implantation in implantable device. The present sequence represents a  
CC human osteogenic protein-1 (OP-1)  
XX  
XX Sequence 431 AA;  
SQ  
Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405  
RESULT 176

ABU56730  
ID ABU56730 standard; protein; 431 AA.  
XX  
XX AC ABU56730;  
XX  
XX 02-APR-2003 (first entry)  
DT  
XX  
XX Lung cancer-associated polypeptide #323.  
DE  
XX  
XX Lung cancer-associated polypeptide; cytosolic; emphysema;  
KW antiinflammatory; antisthmatic; non-small cell lung cancer; atelectasis;  
KW small cell lung cancer; benign lesion; precancerous lesion; bronchitis;  
KW chronic obstructive pulmonary disease; hypersensitivity pneumonitis;  
KW interstitial pulmonary fibrosis; fibrosis; asthma; bronchiectasis.  
XX  
XX Unidentified.  
OS  
XX W0200286443-A2.  
PN  
XX 31-OCT-2002.  
PD  
XX 18-APR-2002; 2002WO-US012476.  
PE  
XX 18-APR-2001; 2001US-0284770P.  
PR 10-MAY-2001; 2001US-0290492P.  
PR 09-NOV-2001; 2001US-0339245P.  
PR 13-NOV-2001; 2001US-0350666P.  
PR 29-NOV-2001; 2001US-0334370P.  
PR 12-APR-2002; 2002US-0372246P.  
XX  
XX (EOSB) EOS BIOTECHNOLOGY INC.  
XX  
XX Azi N, Murray R;  
PI WPI; 2003-093161/08.  
DR N-PSDB; ABX76459.  
XX  
XX Detecting a lung cancer-associated transcript in a cell from a patient  
PT for treating lung cancer, by contacting a biological sample from the  
PT patient with a polynucleotide that exhibits increased or decreased  
XX expression in lung cancer.  
XX  
XX Claim 27; Page 438; 453pp; English.  
XX  
XX The invention relates to a method for detecting a lung cancer-associated  
CC transcript in a cell from a patient, comprising contacting a biological  
CC sample from the patient with a polynucleotide that selectively hybridizes  
CC to a sequence that is at least 80 % identical to a gene that exhibits  
CC increased or decreased expression in lung cancer samples. Lung cancer-  
CC associated polynucleotides and polypeptides are used for identifying a  
CC compound that modulates a lung cancer-associated polypeptide, for  
CC inhibiting proliferation of a lung cancer-associated cell to treat lung  
CC cancer in a patient and for treating a mammal having lung cancer by  
CC administering a modulatory compound identified. The methods are useful  
CC for treating lung cancer, such as small cell lung cancer, non-small cell  
CC lung cancer or other benign or precancerous lesions, e.g. atelectasis,  
CC emphysema, bronchitis, chronic obstructive pulmonary disease, fibrosis,  
CC hypersensitivity pneumonitis, interstitial pulmonary fibrosis, asthma and  
CC bronchiectasis. The genes, polynucleotides and polypeptides are useful  
CC for diagnostic purposes and as targets for screening for therapeutic  
CC compounds that modulate lung cancer, such as antibodies. Sequences  
CC ABU56408-ABU56745 represent lung cancer-associated polypeptides of the  
CC invention  
XX  
XX Sequence 431 AA;  
SQ  
Query Match 100.0%; Score 111; DB 6; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405



## RESULT 177

ABR44022

ID ABR44022 standard; protein; 431 AA.

XX ABR44022;

XX 04-AUG-2003 (first entry)

XX Human osteogenic protein-1 (OP-1).

XX Bone precursor; osteopathic; bone formation; osteoporosis; human;

XX osteogenic protein; bone morphogenic protein; BMP; OP-1.

XX Homo sapiens.

XX MO2003024316-A2.

XX 27-MAR-2003.

XX 20-SEP-2002; 2002MO-US029966.

XX 21-SEP-2001; 2001US-00960421.

XX (STYC) STRYKER CORP.

XX Dalal PS, Landeryou TU, Toch CA, Kulkarni SC;

XX WPI; 2003-441013/41.

XX N-PSDB; ACC48170.

PT Bone precursor composition useful for inducing bone formation comprises cement mixture or solid cement and pore-forming agent.

XX Disclosure; Page 98-99; 106pp; English.

XX The invention relates to a bone precursor composition that comprises cement mixture or solid cement and a pore-forming agent. The pore-forming agent has a particle size of 20 - 500 micro M. The composition is useful for inducing bone formation; in prosthetic devices e.g. a hip device, CC fusion cage and a maxillofacial device; in ligament repair such as CC anterior cruciate ligament fixation or ligament attachment in the CC appendicular system to assist in the integration of ligament and bone; in CC clinical procedures for joint arthroplasty in hips, knees, elbows, and CC other joints where a diseased or damaged natural joint is replaced by a CC prosthetic joint; in clinical procedures such as vertebroplasty. Also CC useful for treating osteoporosis. The present sequence represents a human CC osteogenic protein (OP-1), a bone morphogenic protein (BMP) that can be CC used as a bioactive agent in the bone precursor composition of the CC invention.

XX Sequence 431 AA:

SQ Query Match 100.0%; Score 111; DB 6; Length 431;

Best Local Similarity 100.0%; Pred. No. 1.8e-06; Indels 0; Gaps 0;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCAPTQUNAIS 20

Db 386 INPETHPKPCAPTQUNAIS 405

## RESULT 178

ABU63427

ID ABU63427 standard; protein; 431 AA.

XX ABU63427;

XX 07-OCT-2003 (first entry)

XX Human osteogenic protein 1, OP1.

XX

KM Human; OP1; osteogenic protein 1; biodegradable matrix;  
KM autologous replacement body; non-mineralised tissue; skeletal joint;  
KM graft rejection.

XX Homo sapiens.

XX US2003064090-A1.

XX 03-APR-2003.

XX 27-FEB-2002; 2002US-00083825.

XX 03-JUN-1994; 94US-00253398.

XX 02-JUN-1995; 95US-00459129.

XX 13-APR-2000; 2000US-00547601.

XX (KHOU// KHOURI R. K.

XX (SAMP// SAMPATH K.T.

XX (RUEG// RUEGER D.C.

XX Khouri RK, Sampath KT, Rueger DC;

XX WPI; 2003-576374/54.

XX N-PSDB; ACD28509.

XX Disclosure; Page 15-16; 22pp; English.

XX The invention relates to a device for implanting in vivo functional CC replacement body parts, comprises biodegradable matrix and an osteogenic CC protein (e.g. OP1, osteogenic protein 1) to induce formation and to CC permit regeneration of new distinct tissue(s). The matrix defines CC structure, allows attachment of infiltrating cells, comprises residues CC derived from distinct tissue(s) and having dimensions and shape which CC mimic body part to be replaced. Also included are a method for inducing CC in a mammal the formation of an autologous replacement body part CC comprising several distinct tissues, a method for repairing in vivo CC articular cartilage on the surface of a bone and a method for restoring CC in a mammal a non-mineralised tissue in a skeletal joint. The device is CC used for the manufacture of in vivo autogenous replacement body parts CC such as mammalian skeletal joints. The device is biocompatible; non- CC pathogenic and non-antigenic and thereby prevents graft rejection in CC vivo. The composition and method enables to provide complete CC reconstruction of a mechanically and functionally viable skeletal joint. CC The present sequence represents human OP1

SQ Sequence 431 AA:

Query Match 100.0%; Score 111; DB 6; Length 431;

Best Local Similarity 100.0%; Pred. No. 1.8e-06; Indels 0; Gaps 0;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCAPTQUNAIS 20

Db 386 INPETHPKPCAPTQUNAIS 405

## RESULT 179

ABU61634

ID ABU61634 standard; protein; 431 AA.

XX ABU61634;

XX 12-AUG-2003 (first entry)

XX Human osteogenic protein-1, OP-1.

XX OP1, osteogenic protein-1; central nervous system; ischaemia; trauma;

XX tissue-specific morphogenesis; OP-2; 60A; GDF-1; BMP-2A; BMP-2B; DPF;

XX growth differentiation factor-1; bone morphogenetic protein-2A; Vgl;

Vgr-1; BMP-3; BMP-5; BMP-6; motor coordination function; posture; balance; grasp; gait; sensory perception; speech; stroke; hypertension; hypertensive cerebral vascular disease; aneurysm; angina; blood dyscrasia; cardiac failure; cardiac arrest; cardiogenic shock; kidney failure; septic shock; head trauma; spinal cord trauma; seizure; tumour bleeding; loss of blood volume; blood pressure; human; morphogenic protein.

Homo sapiens.

Key Location/Qualifiers  
38..139  
/note="C-terminal seven-cysteine domain. This domain is specifically claimed in claim 1"

US2003022830-A1.

30-JAN-2003.

01-FEB-2002; 2002US-00062370.

22-MAR-1996; 96US-0062044.

21-MAR-1997; 97US-00828281.

(CHAR/) CHARETTE M P.  
(PINK/) FINKLESTEIN S P.

Charette MF, Finklestein SP;  
WPI; 2003-479493/45.  
N-PSDB; ACA61450.

Enhancing recovery of central nervous system function e.g. ischemia and trauma, in a mammal, by administering morphogen comprising a dimeric protein capable of inducing tissue-specific morphogenesis, to the mammal.

Claim 1; Page 21-22; 39pp; English.

The invention relates to enhancing recovery of central nervous system function in a mammal, involves administering an effective amount of a morphogen to a mammal afflicted with a central nervous system injury selected from ischemia or trauma. The morphogen comprises a dimeric protein having the property of inducing tissue-specific morphogenesis in the mammal and comprises a pair of folded polypeptides. Each folded polypeptide has an amino acid sequence having at least 70 % homology with the C-terminal seven-cysteine domain of human OP-1, (residues 38-139 the sequence appearing as ABU61634). The morphogen is selected from human osteogenic protein (OP)-1, mouse OP-1, human OP-2, mouse OP-2, 60A (Drosophila homologue), growth differentiation factor (GDF)-1, bone morphogenetic protein (BMP)-2A, BMP-2B, DPP (Drosophila homologue), Xenopus Vg1, Vgr-1 (murine homologue of BMP-6), BMP-3, BMP-5 and BMP-6, their conservative substitution variants, or the generic morphogens derived from the above proteins appearing as ABU61631, ABU61632, ABU61633, ABU61635 and ABU61636. The method is useful for enhancing recovery of central nervous system (CNS) function, including motor coordination function (such as posture, balance, grasp and gait), sensory perception (such as vision, hearing, touch, taste, proprioception and olfaction) and speech, in a mammal afflicted with CNS injury such as ischemia or trauma, preferably in human. The method is also useful for treating CNS function disorder including stroke caused by hypertension, hypertensive cerebral vascular disease, rupture of an aneurysm, angina, blood dyscrasia, cardiac failure, cardiac arrest, cardiogenic shock, kidney failure, septic shock, head trauma, spinal cord trauma, seizure, bleeding from a tumour, or other loss of blood volume and/or pressure. The present sequence represents human OP-1

Sequence 431 AA:

Query Match 100.0%; Score 111; DB 7; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 INPETHKPCCAPTQNLNALS 20

Db |||||  
386 INPETHKPCCAPTQNLNALS 405

RESULT 180  
ABR62827  
ID ABR62827 standard; protein: 431 AA.  
XX  
AC ABR62827;  
XX  
DT 04-DEC-2003 (first entry)  
XX  
DE Human bone morphogenic protein 7.  
XX  
KW Bone morphogenic protein 7; BMP-7; human; glaucoma; diagnosis; therapy;  
KW ophthalmological.  
XX  
OS Homo sapiens.  
XX  
PN WO2003055443-A2.  
XX  
PD 10-JUL-2003.  
XX  
PF 31-OCT-2002; 2002WO-US035251.  
XX  
PR 31-OCT-2001; 2001US-0334852P.  
XX  
PA (ALCO-) ALCON INC.  
XX (UNYNT-) UNIV NORTH TEXAS HEALTH SCI CENT.  
XX  
PI Clark AF, Wordinger RJ;  
XX  
DR WPI; 2003-559253/52.  
XX  
DR N-PSDB; ACF05923.  
XX  
PT Diagnosing glaucoma in a sample comprises detecting altered expression of  
PT bone morphogenic proteins in sample from a cell or bodily fluid.  
XX  
PS Disclosure; Fig 4a-c; 55pp; English.

The present sequence is the protein sequence of human bone morphogenic protein 7 (BMP-7). RT-PCR showed BMP-7 to be expressed in the human trabecular meshwork and optic nerve head. A claimed method for diagnosing glaucoma involves detecting altered expression of a BMP family member such as BMP-7 by PCR in a sample obtained e.g. from blood or buccal cells. A claimed method for treating glaucoma comprises administering an agonist of BMP-2, BMP-4, BMP-5, BMP-7 or Smad 1/5, or an antagonist of chordin, gremlin or follistatin. A claimed method of identifying a therapeutic agent for treatment of glaucoma comprises identifying a substance that inhibits or stimulates BMP-induced Smad signalling CC pathways or BMP-regulated gene expression, using recombinant cells CC expressing BMP-2A, BMP-4, BMP-5 or BMP-7.

Sequence 431 AA:

Query Match 100.0%; Score 111; DB 7; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 INPETHKPCCAPTQNLNALS 20

Db |||||  
386 INPETHKPCCAPTQNLNALS 405

RESULT 181  
ADB80494  
ID ADB80494 standard; protein: 431 AA.  
XX  
AC ADB80494;  
XX  
DT 04-DEC-2003 (first entry)  
XX  
DE Ovarian cancer-associated protein #29.

Tue Oct 26 09:17:05 2004

us-10-619-910-11.oct24.rag

Page 93

```
XX cytostatic; gene therapy; vaccine; ovarian cancer; diagnosis;
KM post-operative chemotherapy; radiation therapy; tumour prognosis;
KM pre-cancerous lesion detection.
XX Homo sapiens.
XX WO2002102235-A2.
XX 27-DEC-2002.
XX 18-JUN-2002; 2002WO-US019297.
XX 18-JUN-2001; 2001US-0299234P.
XX 27-AUG-2001; 2001US-0315287P.
XX 05-SEP-2001; 2001US-0317544P.
XX 13-NOV-2001; 2001US-0350666P.
XX 12-APR-2002; 2002US-0372246P.
XX (EOSB-) EOS BIOTECHNOLOGY INC.
XX Mack DH, Gish KC;
XX WPI; 2003-167431/16.
XX N-PSDB; ADB80493.
XX Detecting an ovarian cancer-associated transcript in a cell from a
PT patient, comprises contacting a biological sample from the patient with a
PT polynucleotide that hybridizes to an ovarian cancer gene.
XX Claim 13; Page 294; 332pp; English.
XX The invention relates to a method of detecting an ovarian cancer-
CC associated transcript in a cell from a patient, by contacting a
CC biological sample from the patient with a polynucleotide that selectively
CC hybridizes to a sequence at least 80% identical to any of one of 80
CC nucleic acid sequences given in the specification. The method is useful
CC in diagnosing ovarian cancer and in identifying and using agents and/or
CC targets that inhibit ovarian cancer. The nucleic acid molecule,
CC polypeptide and the antibody may also be used in detecting ovarian
CC cancers, monitoring and early detection of relapse following treatment,
CC monitoring response to therapy, selecting patients for post-operative
CC chemotherapy or radiation therapy, in selecting mode of therapy,
CC determining tumour prognosis, early detection of pre-cancerous lesions,
CC and as vaccines. This sequence corresponds to one of the proteins used
CC for the detection method of the invention.
XX Sequence 431 AA;
SQ
Query Match 100.0%; Score 111; DB 7; Length 431;
Best Local Similarity 100.0%; Pred. No. 1.8e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
CY 1 INPETHKPCCAPTOLNAIS 20
Db 386 INPETHKPCCAPTOLNAIS 405
RESULT 182
ABM00788
ID AEM00788 standard; protein; 431 AA.
XX AEM00788;
XX 15-JAN-2004 (first entry)
XX Human osteogenic protein (hOP)-1.
XX Parkinson's disease; nerve-cell adhesion molecule; LI; DPP; Vg1; Vgr-1;
XX nigrostriatal pathway; morphogen; osteogenic protein; OP; 60A;
XX GDF-1; bone morphogenic protein; BMP; human.
XX Homo sapiens.
```

```
XX US2003109445-A1.
XX 12-JUN-2003.
XX 16-OCT-2002; 2002US-00272503.
XX 11-MAR-1991; 91US-00667274.
XX 30-AUG-1991; 91US-00752764.
XX 30-AUG-1991; 91US-00753059.
XX 31-JUL-1992; 92US-00922813.
XX 23-SEP-1993; 93US-00126100.
XX 16-JUN-1994; 94US-00260675.
XX 25-SEP-1997; 97US-00938622.
XX (RUEGER/) RUEGER D C.
XX (SAMP/) SAMPATH K T.
XX (COHE/) COHEN C M.
XX (OPPE/) OPPERMAN H.
XX (PANG/) PANG R H L.
XX Rueger DC, Sampath KT, Cohen CM, Oppermann H, Pang RHL;
XX WPI; 2003-801273/75.
XX N-PSDB; AAD61577.
XX Treating Parkinson's disease comprises using a morphogen that stimulates
PT production of a nerve-cell adhesion molecule or LI by a specific cell in
PT vitro.
XX Claim 1; Page 27-28; 0pp; English.
XX The invention relates to a method for treating Parkinson's disease which
CC involves using a morphogen that stimulates production of a nerve-cell
CC adhesion molecule or LI by a specific cell in vitro. The invention is
CC used to treat Parkinson's disease and to restore or preserve neural cell
CC function in a mammal afflicted with Parkinson's disease. It is used to
CC restore or maintain the integrity of the nigrostriatal pathway or to
CC prevent degeneration of the nigrostriatal pathway in a mammal afflicted
CC with Parkinson's disease. In the treatment method, morphogen may be
CC complexed with a prodomain polypeptide that is the pro-domain of
CC osteogenic protein (OP)-1, OP-2, 60A, GDF-1, bone morphogenic protein
CC (BMP)2A, BMP2B, DPP, Vg1, Vgr-1, BMP3, BMP5, or BMP-6. The present
CC sequence is the human OP-1 protein. This sequence is used to illustrate
CC the method of the invention.
XX Sequence 431 AA;
SQ
Query Match 100.0%; Score 111; DB 7; Length 431;
Best Local Similarity 100.0%; Pred. No. 1.8e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
CY 1 INPETHKPCCAPTOLNAIS 20
Db 386 INPETHKPCCAPTOLNAIS 405
RESULT 183
AD139797
ID AD139797 standard; protein; 431 AA.
XX AD139797;
XX 22-APR-2004 (first entry)
XX Human osteogenic protein (OP)-1.
XX Parkinson's disease; therapeutic; therapy; osteogenic protein-1; OP-1;
XX morphogen; motor coordination; tremor; rigidity; bradykinesia;
XX equilibrium deficit; posture deficit; neuronal cell survival; neuropathy;
XX nigrostriatal pathway; cell adhesion molecule; CM; human.
XX Homo sapiens.
```

XX Key Location/Qualifiers  
FH Region 330.431  
FT /note="Specifically claimed in Claim 1"  
XX  
XX US6506729-B1.  
XX  
XX 14-JAN-2003.  
XX  
XX 25-SEP-1997; 97US-00938622.  
XX  
XX 08-MAR-1991; 91US-00667274.  
XX 30-AUG-1991; 91US-00752764.  
XX 30-AUG-1991; 91US-00753059.  
XX 31-JUL-1992; 92US-0092813.  
XX 23-SEP-1993; 93US-00126100.  
XX 16-JUN-1994; 94US-00260675.  
XX  
XX (CUR1-) CURIS INC.  
XX  
XX Rueger DC, Sampath KT, Cohen CM, Oppermann H, Pang RHL;  
XX WPI; 2003-584258/55.  
XX N-PSDB; ADI39796.  
XX  
XX Treatment of mammal with symptoms of Parkinson's disease by administering  
PT soluble human OP-1 polypeptide morphogen containing amino acid sequence  
PT to site of neural damage or neuropathy.  
XX  
XX Claim 1; SEQ ID NO 2; 44pp; English.  
XX  
XX The present invention relates to therapeutic methods and compositions for  
CC treating Parkinson's disease including methods of enhancing the survival  
CC of neural cells. A mammal with symptoms of Parkinson's disease is treated  
CC by administering a soluble human osteogenic protein (OP)-1 morphogen to  
CC the site of neural damage or neuropathy in the mammal. The invention is  
CC useful for treating a mammal with symptoms of Parkinson's disease  
CC consisting of motor coordination, tremor, rigidity, bradykinesia or  
CC deficits in equilibrium and posture, to restore motor function. The  
CC invention maintains neural pathways in a mammal, including enhancing the  
CC survival of neurons at the risk of dying, inducing the cellular repair of  
CC damaged neurons and neural pathways and stimulating the neurons to  
CC maintain their differentiated phenotype. It stimulates the expression of  
CC cell adhesion molecule (CAM) in neurons and enhances neuronal cell  
CC survival. It also provides means for evaluating the status of nerve  
CC tissue, including means for detecting and monitoring neuropathies in a  
CC mammal. It also prevents degeneration of the nigrostriatal pathway or  
CC loss of functional activity associated with this pathway. The present  
CC sequence is human osteogenic protein-1.  
XX  
XX SQ Sequence 431 AA;  
XX  
XX Query Match 100.0%; Score 111; DB 7; Length 431;  
XX Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
XX  
XX QY 1 INPETHKPCCAPTOLNAIS 20  
XX ||||||||||||||||||  
XX 386 INPETHKPCCAPTOLNAIS 405  
XX  
XX RESULT 184  
XX ADJ62677  
XX ID ADJ62677 standard; protein; 431 AA.  
XX AC ADJ62677;  
XX XX  
XX DT 06-MAY-2004 (first entry)  
XX XX  
XX DE Human osteogenic protein 1, OPL.  
XX XX  
XX human; osteogenic protein 1; OPL; osteogenic device;  
XX endochondral bone formation; bone repair; cartilage repair;  
XX  
XX KW

KW vascularisation; mineralisation; bone marrow differentiation.  
XX  
XX OS Homo sapiens.  
XX XX  
XX PN US6551995-B1.  
XX XX  
XX PD 22-APR-2003.  
XX XX  
XX PF 04-SEP-1998; 98US-00148925.  
XX  
XX 08-APR-1988; 88US-00179406.  
XX 15-AUG-1988; 88US-00232630.  
XX 23-FEB-1989; 89US-00315342.  
XX 17-OCT-1989; 88US-00422643.  
XX 17-OCT-1989; 88US-00422623.  
XX 17-OCT-1989; 89US-00422639.  
XX 22-FEB-1990; 90US-00483913.  
XX 20-AUG-1990; 90US-00569920.  
XX 07-SEP-1990; 90US-00579685.  
XX 18-OCT-1990; 90US-00599543.  
XX 18-OCT-1990; 90US-00600024.  
XX 21-NOV-1990; 90US-00616374.  
XX 04-DEC-1990; 90US-00621849.  
XX 04-DEC-1990; 90US-00621988.  
XX 22-FEB-1991; 91US-00660162.  
XX 20-DEC-1991; 91US-00810560.  
XX 28-JAN-1992; 92US-00827052.  
XX 21-FEB-1992; 92US-00841546.  
XX 01-NOV-1993; 93US-00147023.  
XX 24-MAY-1995; 95US-00449699.  
XX  
XX (STYC ) STRYKER CORP.  
XX  
XX Oppermann H, Ozkaynak E, Kuberampath T, Rueger DC, Pang RHL;  
XX WPI; 2003-575998/54.  
XX N-PSDB; ADJ62676; ADJ62678.  
XX  
XX Osteogenic device useful for inducing endochondral bone formation in  
PT mammal, comprises ceramic or biodegradable non-collagen polymer matrix  
PT containing substantially pure natural-sourced mammalian osteogenic  
PT protein.  
XX  
XX Disclosure; SEQ ID NO 2; 127pp; English.  
XX  
XX PS The invention relates to an osteogenic device for implantation in a  
XX mammal, comprising a ceramic or biodegradable non-collagen polymer matrix  
XX defining pores of a dimension sufficient to permit influx,  
XX differentiation and proliferation of migratory progenitor cells from the  
XX body of mammal, and a substantially pure osteogenic protein competent to  
XX induce endochondral bone formation when disposed in the matrix and  
XX implanted in mammal. The device is useful for producing endochondral bone  
XX formation in mammals, for bone and cartilage repair, for inducing the  
XX full developmental cascade of endochondral bone formation including  
XX vascularisation, mineralisation and bone marrow differentiation at the  
XX locus of an implant when implanted in a mammalian body. The device is  
XX useful for bone formation in various orthopedic, periodontal and  
XX reconstructive procedures. The present sequence represents the amino acid  
XX sequence of the human osteogenic protein 1, OPL.  
XX  
XX SQ Sequence 431 AA;  
XX  
XX Query Match 100.0%; Score 111; DB 7; Length 431;  
XX Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
XX  
XX QY 1 INPETHKPCCAPTOLNAIS 20  
XX ||||||||||||||||||  
XX 386 INPETHKPCCAPTOLNAIS 405  
XX  
XX RESULT 185  
XX ADN39200

ID ADN39200 standard; protein; 431 AA.  
 XX  
 AC ADN39200;  
 DT 17-JUN-2004 (first entry)  
 XX  
 DE Cancer/angiogenesis/fibrosis-related polypeptide, SEQ ID NO:518.  
 XX  
 KW Human; differential expression; cancer; angiogenic disorder;  
 KW fibrotic disorder; psoriasis; ischaemia; heart disease; atherosclerosis;  
 KW inflammatory disease; autoimmune disease; scarring; uterine fibroid;  
 KW retinal neovascularization syndrome; drug screening; drug targeting;  
 KW detection; diagnosis; prognosis; drug screening; drug targeting;  
 KW wound healing; contraception; cytostatic; cardiant; immunomodulatory;  
 KW vulnery; gene therapy; vaccine.  
 XX  
 OS Homo sapiens.  
 PN WO2003042661-A2.  
 PD 22-MAY-2003.  
 XX  
 PF 13-NOV-2002; 2002WO-US036810.  
 XX  
 PR 13-NOV-2001; 2001US-0350666P.  
 PR 21-NOV-2001; 2001US-0332464P.  
 PR 29-NOV-2001; 2001US-034393P.  
 PR 03-DEC-2001; 2001US-0335394P.  
 PR 14-DEC-2001; 2001US-0340376P.  
 PR 08-JAN-2002; 2002US-0347211P.  
 PR 10-JAN-2002; 2002US-0347349P.  
 PR 08-FEB-2002; 2002US-0355250P.  
 PR 13-FEB-2002; 2002US-0356714P.  
 PR 20-FEB-2002; 2002US-0359077P.  
 PR 29-MAR-2002; 2002US-036809P.  
 PR 04-APR-2002; 2002US-0370110P.  
 PR 12-APR-2002; 2002US-0372246P.  
 PR 05-JUN-2002; 2002US-0386614P.  
 PR 16-JUL-2002; 2002US-0386839P.  
 PR 22-JUL-2002; 2002US-038775P.  
 PR 22-JUL-2002; 2002US-0387845P.  
 PR 09-SEP-2002; 2002US-0409450P.  
 XX  
 PA (EOSB-) EOS BIOTECHNOLOGY INC.  
 XX  
 PI Afar D, Aziz N, Ginsburg WM, Gish KC, Glynn R, Hevez PA;  
 PI Mack DH, Murray R, Watson SR, Wilson KE, Zlotnik A;  
 XX  
 DR WPI; 2003-468649/44.  
 XX  
 PT Determining the presence or absence of a pathological cell in a patient,  
 PT useful for diagnosing, prognosing or treating cancer, comprises detecting  
 PT a nucleic acid in a biological sample.  
 XX  
 PS Claim 12; SEQ ID NO 518; 1385pp; English.  
 XX

CC sequence represents a polypeptide of the invention.  
 XX  
 SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 7; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQLNALS 20  
 DB 386 INPETHKPCAPQLNALS 405

RESULT 186  
 ID ADN39469  
 XX ADN39469 standard; protein; 431 AA.  
 AC  
 XX  
 DT 17-JUN-2004 (first entry)  
 XX  
 DE Cancer/angiogenesis/fibrosis-related polypeptide, SEQ ID NO:469.  
 XX  
 KW Human; differential expression; cancer; angiogenic disorder;  
 KW fibrotic disorder; psoriasis; ischaemia; heart disease; atherosclerosis;  
 KW inflammatory disease; autoimmune disease; scarring; uterine fibroid;  
 KW retinal neovascularization syndrome; drug screening; drug targeting;  
 KW detection; diagnosis; prognosis; drug screening; drug targeting;  
 KW wound healing; contraception; cytostatic; cardiant; immunomodulatory;  
 KW vulnery; gene therapy; vaccine.  
 XX  
 OS Homo sapiens.  
 PN WO2003042661-A2.  
 PD 22-MAY-2003.  
 XX  
 PF 13-NOV-2002; 2002WO-US036810.  
 XX  
 PR 13-NOV-2001; 2001US-0350666P.  
 PR 21-NOV-2001; 2001US-0332464P.  
 PR 29-NOV-2001; 2001US-034393P.  
 PR 03-DEC-2001; 2001US-0335394P.  
 PR 14-DEC-2001; 2001US-0340376P.  
 PR 08-JAN-2002; 2002US-0347211P.  
 PR 10-JAN-2002; 2002US-0347349P.  
 PR 08-FEB-2002; 2002US-0355250P.  
 PR 13-FEB-2002; 2002US-0356714P.  
 PR 20-FEB-2002; 2002US-0359077P.  
 PR 29-MAR-2002; 2002US-036809P.  
 PR 04-APR-2002; 2002US-0370110P.  
 PR 12-APR-2002; 2002US-0372246P.  
 PR 05-JUN-2002; 2002US-0386614P.  
 PR 16-JUL-2002; 2002US-0386839P.  
 PR 22-JUL-2002; 2002US-038775P.  
 PR 22-JUL-2002; 2002US-0387845P.  
 PR 09-SEP-2002; 2002US-0409450P.  
 XX  
 PA (EOSB-) EOS BIOTECHNOLOGY INC.  
 XX  
 PI Afar D, Aziz N, Ginsburg WM, Gish KC, Glynn R, Hevez PA;  
 PI Mack DH, Murray R, Watson SR, Wilson KE, Zlotnik A;  
 XX  
 DR WPI; 2003-468649/44.  
 XX  
 PT Determining the presence or absence of a pathological cell in a patient,  
 PT useful for diagnosing, prognosing or treating cancer, comprises detecting  
 PT a nucleic acid in a biological sample.  
 XX  
 PS Claim 12; SEQ ID NO 469; 1385pp; English.  
 XX  
 CC The invention relates to nucleic acids and proteins (ADN39469-ADN40064)



03-DEC-2001; 2001US-0335394P .

Query Match	Best Local Similarity	Score 111	DB 7	Length 431
Matches 20	Conservative 0	Mismatches 0	Indels 0	Gaps 0
Qy	1 INDETVKPKPCAPTOLNAIS 20			
Db	386 INDETVKPKPCAPTOLNAIS 405			
RESULT 187				
ID	ADN39488			
AC	ADN39488 standard; protein; 431 AA.			
XX	ADN39488;			
DT	17-JUN-2004 (first entry)			
DE	Cancer/angiogenesis/fibrosis-related polypeptide, SEQ ID NO:A88.			
XX	Human; differential expression; cancer; angiogenic disorder;			
KW	fibrotic disorder; psoriasis; ischaemia; heart disease; atherosclerosis;			
KW	inflammatory disease; autoimmune disease;			
KW	retinal neovascularisation syndrome; scarring; uraemic fibroid;			
KW	detection; diagnosis; prognosis; drug screening; drug targeting;			
KW	wound healing; contraception; cytostatic; cardiant; immunomodulatory;			
XX	vulnerary; gene therapy; vaccine.			
OS	Homo sapiens.			
XX				
PN	MO2003042661-A2.			
XX				
PD	22-MAY-2003.			
XX				
PF	13-NOV-2002; 2002WO-US036810.			
XX				
PR	13-NOV-2001; 2001US-0350666P.			
PR	21-NOV-2001; 2001US-0332466P.			
PR	29-NOV-2001; 2001US-0334393P.			
PR	03-DEC-2001; 2001US-0335394P.			
PR	14-DEC-2001; 2001US-0340376P.			
PR	08-JAN-2002; 2002US-0347211P.			
PR	10-JAN-2002; 2002US-0347349P.			
PR	08-FEB-2002; 2002US-0355250P.			
PR	13-FEB-2002; 2002US-0355715P.			
PR	20-FEB-2002; 2002US-0358077P.			
PR	29-MAR-2002; 2002US-0368809P.			
PR	04-APR-2002; 2002US-0370110P.			
PR	12-APR-2002; 2002US-0372246P.			
PR	05-JUN-2002; 2002US-0366614P.			
PR	16-JUL-2002; 2002US-0396839P.			
PR	22-JUL-2002; 2002US-0397775P.			
PR	22-JUL-2002; 2002US-0397845P.			
PR	09-SEP-2002; 2002US-0409450P.			
XX				

PR 14-DEC-2001; 2001US-0340376P.  
 PR 08-JAN-2002; 2002US-0347211P.  
 PR 10-JAN-2002; 2002US-0347349P.  
 PR 08-FEB-2002; 2002US-0355250P.  
 PR 13-FEB-2002; 2002US-0356714P.  
 PR 20-FEB-2002; 2002US-0359077P.  
 PR 29-MAR-2002; 2002US-036809P.  
 PR 04-APR-2002; 2002US-0370110P.  
 PR 12-APR-2002; 2002US-0372246P.  
 PR 05-JUN-2002; 2002US-038614P.  
 PR 16-JUL-2002; 2002US-0396839P.  
 PR 22-JUL-2002; 2002US-0397775P.  
 PR 22-JUL-2002; 2002US-0397845P.  
 PR 09-SEP-2002; 2002US-0409450P.  
 XX (ECSP-) EOS BIOTECHNOLOGY INC.  
 XX Afar D, Aziz N, Ginsburg WM, Gish KC, Glynn R, Hevezi PA,  
 PI Mack DH, Murray R, Watson SR, Wilson KE, Zlotnick A;  
 XX N-PSDB; ADN39524.  
 DR WPI: 2003-468649/44.  
 XX N-PSDB; ADN39524.  
 PT Determining the presence or absence of a pathological cell in a patient,  
 PT useful for diagnosing, prognosing or treating cancer, comprises detecting  
 PT a nucleic acid in a biological sample.  
 XX  
 PS Claim 12; SEQ ID NO A125; 1385BP; English.  
 CC The invention relates to nucleic acids and proteins (ADN38683-ADN40064)  
 CC whose expression is upregulated or downregulated in specific cancers or  
 CC other diseases such as angiotensin or fibrotic disorders, and to methods  
 CC of determining the presence or absence of a pathological cell in a  
 CC patient by detecting a nucleic acid at least 80% identical to those of  
 CC the invention or by detecting a polypeptide of the invention. The  
 CC invention also relates to expression vectors and host cells comprising a  
 CC nucleic acid of the invention; antibodies which specifically bind a  
 CC polypeptide of the invention; use of such antibodies for drug targeting;  
 CC and methods of screening for modulators of activity or expression of the  
 CC polypeptides and nucleic acids. The nucleic acids, polypeptides,  
 CC antibodies and methods are useful for diagnosing, prognosing and treating  
 CC cancer and other conditions such as psoriasis, ischemia, heart disease,  
 CC atherosclerosis, inflammatory diseases, autoimmune diseases, retinal  
 CC neovascularization syndromes, scarring and uterine fibroids. They may  
 CC also be useful in wound healing and in contraception. The present  
 CC sequence represents a polypeptide of the invention.  
 CC  
 SO Sequence 431 AA;  
 QY  
 Best Local Similarity 100.0%; Score 111; DB 7; Length 431;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 DB 1 INPETHKPCCAPQTOLNAIS 20  
 386 INPETHKPCCAPQTOLNAIS 405  
 RESULT 189  
 ADE52748  
 ID ADE52748 standard; protein; 431 AA.  
 XX  
 AC ADE52748;  
 XX  
 DT 29-JAN-2004 (first entry)  
 XX  
 DE Human osteogenic protein, OP1.  
 XX Human osteogenic protein, OP1.  
 XX Human; osteogenic protein; OP1; CBMP2A; CBMP2B; osteogenic device;  
 KW endochondral bone formation; cartilage formation; non-union fracture;  
 KW cartilage repair; dental reconstructive procedure.  
 XX  
 OS Homo sapiens.

XX Key Location/Qualifiers  
 FH 293..431  
 FT Region /note="This region is claimed in claim 30"  
 FT /note="431  
 FT Region /note="This region is claimed in claim 29"  
 FT /note="431  
 FT Region /note="This region is claimed in claim 28"  
 FT /note="431  
 FT Region /note="This region is claimed in claim 27"  
 FT /note="431  
 FT Region /note="This region is claimed in claim 26"  
 FT /note="431  
 FT Region /note="This region is claimed in claim 25"  
 FT /note="431  
 FT Region /note="This region is claimed in claim 24"  
 FT /note="431  
 FT Region /note="This region is claimed in claim 23"  
 PN US2003069401-A1.  
 XX 10-APR-2003.  
 PD 97US-00957425.  
 XX 24-OCT-1997;  
 PF 08-APR-1988; 88US-00179406.  
 XX 15-AUG-1988; 88US-00322630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 18-OCT-1990; 90US-00589543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810580.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 PR 22-DEC-1992; 92US-00955345.  
 PR 01-NOV-1993; 93US-00147023.  
 PR 23-MAY-1995; 95US-00447570.  
 XX (OPPE/) OPPERMAN H.  
 PA (OZKA/) OZKAYNAK E.  
 PA (KUBE/) KUBERASAMPATH T.  
 PA (RUEG/) RUEGER D C.  
 PA (PANG/) PANG R H L.  
 PI Opperman H, Ozkaynak E, Kuberasampath T, Rueger DC, Pang RHL;  
 DR WPI: 2004-008898/01.  
 DR P-PSDB; ADE52747.  
 XX  
 PT Osteogenic device for inducing endochondral bone formation, has  
 PT osteogenic protein comprising a pair of unglycosylated protein chains  
 PT disulfide bonded to produce dimeric species, dispersed within  
 PT biocompatible matrix.  
 XX  
 PS Disclosure; SEQ ID NO 2; 130BP; English.  
 XX  
 CC The invention relates to an osteogenic device for implantation in a  
 CC mammal, comprising osteogenic protein (OP) dispersed within a  
 CC biocompatible, in vivo biodegradable matrix, where OP comprises a pair  
 CC (P) of unglycosylated protein chains disulfide bonded to produce dimeric  
 CC species having a conformation in mammal when disposed in the matrix and  
 CC endochondral bone formation in mammal when disposed in the matrix and  
 CC accessible to the cells. Also included are substantially a pure mammalian  
 CC osteogenic protein (comprising a pair of unglycosylated polypeptide  
 CC chains and capable of inducing endochondral bone formation in association  
 CC with a matrix when implanted in a mammal, where the osteogenic protein

comprises peptides derived from human or mouse OPI), a DNA sequence encoding a protein capable of inducing endochondral bone formation in a mammal, a vector comprising the DNA, a host cell harbouring and capable of expressing (DNA or vector), an osteogenic protein as defined above expressed from recombinant DNA in a host cell, a polypeptide chain useful as a subunit of a dimeric osteogenic protein and an antibody (Ab) capable of binding specifically to an epitope on the osteogenic proteins. The osteogenic device is useful for inducing local cartilage and bone formation, for endochondral bone formation in a mammal, for inducing cartilage or endochondral bone formation in a mammal, or for inducing endochondral bone formation in a non-union fracture in a mammal. The osteogenic device is useful for cartilage repair in a mammal, in periodontal or dental reconstructive procedures, or in endochondral bone reconstructive procedures. The antibody is useful for selectively extracting osteogenic protein from a mixture of molecules. The host cell is useful for producing a protein by recombinant gene expression. The osteogenic proteins are useful to raise monoclonal are polyclonal antibodies capable of specifically binding to an epitope of the osteogenic protein. The present sequence represents a human osteogenic protein, fragments of which are used in osteogenic device of the invention. Note: The claims refer to regions of mouse and human osteogenic proteins which are functional in the osteogenic device, however the authors refer to a DNA SEQ ID number where they really mean to refer to a protein.

SO Sequence 431 AA;

Query Match 100.0%; Score 111; DB 8; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPQOLNAIS 20  
DB 386 INPETHKPCCAPQOLNAIS 405

RESULT 190  
ADH11584  
ID ADH11584 standard; protein; 431 AA.

XX AC ADH11584;  
XX DT 11-MAR-2004 (first entry)  
XX DE Human bone morphogenic protein (BMP) polypeptide #12.  
XX KM Human; bone morphogenic protein; BMP; weight gain; appetite suppression;  
XX KM fat mass reduction; cell sensitivity; glucose uptake; diabetes;  
XX KM insulin resistance; hyperglycaemia; hypertension;  
XX KM coronary artery disease; renal failure; neuropathy; metabolic disorder;  
XX KM glucose metabolism disorder; endocrine disorder; obesity; weight loss;  
XX KM liver disorder; cartilage growth disorder; bone growth disorder;  
XX KM inflammation; aberrant cell growth; liver cancer.  
XX OS Homo sapiens.  
XX PN US2003224501-A1.  
XX PD 04-DEC-2003.  
XX PF 14-FEB-2003; 2003US-00366345.  
XX PR 17-MAR-2000; 2000US-0190067P.  
XX PR 16-MAR-2001; 2001US-00809269.  
XX PR 23-MAR-2001; 2001WO-US009229.  
XX PR 17-JAN-2002; 2002US-0348621P.  
XX PR 22-JAN-2002; 2002US-0349356P.  
XX PR 28-JAN-2002; 2002US-0351520P.  
XX PR 06-FEB-2002; 2002US-0354265P.  
XX PR 15-FEB-2002; 2002US-0356749P.  
XX PR 16-JAN-2003; 2003US-00345236.  
XX PA (YOUNG/) YOUNG P E.

PA (RUBE/) RUBEN S M.  
XX PI Young PE, Ruben SM;  
XX DR WPI; 2004-022075/02.  
XX DR N-PSDB; ADH11563.  
XX PT New bone morphogenic protein polypeptides and polynucleotides; useful for  
XX PT diagnosing, preventing, treating or ameliorating a medical condition,  
XX PT e.g. diabetes, dyslipidemia, hypertension, coronary artery disease or  
XX PT neuropathy.  
XX PS Claim 1; SEQ ID NO 39; 224pp; English.  
XX CC The invention relates to human bone morphogenic protein (BMP)  
XX CC polypeptides and the polynucleotides encoding them. The invention also  
XX CC relates to a method for limiting weight gain, suppressing appetite or  
XX CC reducing fat mass, comprising administering to a mammalian subject a  
XX CC therapeutic amount of a BMP polypeptide, and a method for increasing the  
XX CC sensitivity of a cell to insulin or increasing glucose uptake by a cell,  
XX CC comprising contacting the cell with a BMP polypeptide. The BMP  
XX CC polypeptides and polynucleotides are useful for diagnosing a pathological  
XX CC condition or a susceptibility to a pathological condition in a subject or  
XX CC for preventing, treating or ameliorating a medical condition, e.g.  
XX CC diabetes, insulin resistance, hyperglycaemia, hypertension, coronary  
XX CC artery disease, renal failure, neuropathy, metabolic disorders, glucose  
XX CC metabolism disorder, endocrine disorders, obesity, weight loss, liver  
XX CC disorders, cartilage and bone growth disorders, inflammation or aberrant  
XX CC cell growth such as liver cancer. The BMP polypeptides and  
XX CC polynucleotides are also useful for regulating nutritional partitioning,  
XX CC limiting weight gain, suppressing appetite, reducing fat mass, increasing  
XX CC the sensitivity of a cell to insulin or increasing glucose uptake by a  
XX CC cell. This sequence represents a human BMP polypeptide of the invention.

SO Sequence 431 AA;

Query Match 100.0%; Score 111; DB 8; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPQOLNAIS 20  
DB 386 INPETHKPCCAPQOLNAIS 405

RESULT 191  
ADH17316  
ID ADH17316 standard; protein; 431 AA.

XX AC ADH17316;  
XX DT 11-MAR-2004 (first entry)  
XX DE Human NOV1c protein - SEQ ID 6.  
XX NOX; antidiabetic; anorectic; cardiast; hypotensive;  
XX KM antiarteriosclerotic; anorectic; virucide; antibacterial; fungicide;  
XX KM protozoacide; nootropic; neuroprotective; antiparkinsonian;  
XX KM anticonvulsant; osteopathic; antiarthritic; antiinflammatory;  
XX KM dermatological; antiaesthetic; antilipemic; metabolic; diabetes;  
XX KM obesity; infection; anorexia; cancer; cardiovascular; hypertension;  
XX KM atherosclerosis; neurodegenerative; Alzheimer's disease; Parkinson's;  
XX KM epilepsy; immune; osteoarthritis; haemopoietic;  
XX KM inflammatory skin disorder; asthma; dyslipidemia; wound healing;  
XX KM cell differentiation; proliferation; haemopoiesis; angiogenesis;  
XX KM angiogenesis; gene therapy; chromosome mapping; tissue typing;  
XX KM pharmacogenomic; human.  
XX OS Homo sapiens.  
XX PN WO2003093432-A2.  
XX PD 13-NOV-2003.



XX 02-MAY-2003; 2003MO-US013690.  
 PF 02-MAY-2002; 2002US-0377321P.  
 XX 08-MAY-2002; 2002US-0378730P.  
 PR 24-MAY-2002; 2002US-0383075P.  
 PR 29-MAY-2002; 2002US-0384044P.  
 PR 30-MAY-2002; 2002US-0384215P.  
 PR 30-MAY-2002; 2002US-0384296P.  
 PR 30-MAY-2002; 2002US-0384327P.  
 PR 30-MAY-2002; 2002US-0384352P.  
 PR 31-MAY-2002; 2002US-0385211P.  
 PR 02-JUL-2002; 2002US-0393333P.  
 PR 09-AUG-2002; 2002US-0402154P.  
 PR 09-AUG-2002; 2002US-0402171P.  
 PR 09-AUG-2002; 2002US-0402204P.  
 PR 22-AUG-2002; 2002US-0405175P.  
 PR 27-AUG-2002; 2002US-0406129P.  
 PR 23-SEP-2002; 2002US-0412954P.  
 PR 30-SEP-2002; 2002US-0414975P.  
 PR 07-OCT-2002; 2002US-0416661P.  
 PR 24-OCT-2002; 2002US-0420851P.  
 PR 31-OCT-2002; 2002US-0422547P.  
 PR 01-MAY-2003; 2003US-00428275.

## (CURA-) CURAGEN CORP.

XX Alvarez E, Anderson DW, Boldog FL, Catterton E, Edinger SR,  
 PI Fernandes ER, Gerlach VL, Gorman L, Grosse WM, Guo X, Ji W,  
 PI Kehuda R, Li L, MacDougall JR, Padigaru M, Patnirajan M,  
 PI Peterson JD, Rastelli L, Shinkets RA, Spytek KA, Stone DJ,  
 PI Verneer CM, Voss EZ, Zhong M;  
 XX WPI; 2004-053040/05.  
 DR N-PSDB; ADH17315.

XX New isolated NOVX polypeptide, useful for preventing, diagnosing or  
 PT treating NOVX-associated disorders, e.g. osteoarthritis, obesity,  
 PT atherosclerosis, cancer, Parkinson's disease, asthma, or infections.

XX Claim 1; SEQ ID NO 6; 478bp; English.

XX The invention relates to a novel isolated NOVX polypeptide. The  
 CC polypeptide of the invention demonstrates antidiabetic, anorectic,  
 CC cardiatic, hypotensive, antiarteriosclerotic, anorectic, vituicidic,  
 CC antibacterial, fungicide, protozoacide, nootropic, neuroprotective,  
 CC antiParkinsonian, anticonvulsant, osteopathic, antiarthritic,  
 CC antiinflammatory, dermatological, antisthmatic and antidiabetic  
 CC activities. The polypeptides, nucleic acid molecules and antibodies may  
 CC be useful in the manufacture of a medicament for treating metabolic  
 CC disorders, diabetes, obesity, infectious diseases (viral, bacterial,  
 CC fungal, helminthic, and protozoal), anorexia, cancer, cardiovascular  
 CC diseases including hypertension and atherosclerosis, neurodegenerative  
 CC disorders, Alzheimer's disease, Parkinson's disease, epilepsy, immune  
 CC disorders such as osteoarthritis, haemopoietic disorders, inflammatory  
 CC skin disorders, asthma and various types of dyslipidaemia. The nucleic  
 CC acids and polypeptides may also be used as targets for the identification  
 CC of small molecules that modulate or inhibit neurogenesis, cell  
 CC differentiation, cell proliferation, haemopoiesis, wound healing and  
 CC angiogenesis, in gene therapy and the in generation of antibodies that  
 CC bind immunospecifically to NOVX substances for use in therapeutic or  
 CC diagnostic methods. The nucleic acids may be further used as  
 CC hybridisation probes, in chromosome mapping, tissue typing, preventive  
 CC medicine and pharmacogenomics. The current sequence is that of the human  
 CC NOVX protein of the invention.

XX Sequence 431 AA;

Query Match 100.0%; Score 111; DB 8; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOINAI 20  
 DB 386 INPETHKPCCAPTOINAI 405

## RESULT 192

AD125169  
 ID AD125169 standard; protein; 431 AA.

XX AD125169;

DT 15-APR-2004 (first entry)

DE Human osteogenic protein, OP-1.

XX ligament defect; bone morphogenic protein; growth factor;

KW ligament cell-associated matrix; type I collagen; elastin; decorin;

KW aggrecan; OP-1; osteogenic protein-1; human.

XX Homo sapiens.

PN WO2004004663-A2.

XX 15-JAN-2004.

PD 09-JUL-2003; 2003MO-US021697.

PF 09-JUL-2002; 2002US-0395110P.

XX (STYC) STRYKER CORP.

XX Lee JC, Yeh LC;

XX WPI; 2004-132719/13.

DR N-PSDB; AD125178.

XX Treating ligament defects in patients, involves isolating ligament cells,  
 PT culturing ligament cells ex-vivo, recovering cultured ligament cells, and  
 PT implanting the recovered ligament cells into the patient.

XX Disclosure; SEQ ID NO 1; 95pp; English.

XX The invention relates to a novel method for treating a ligament defect in  
 CC a patient. The method involves administering to the patient an effective  
 CC amount of a bone morphogenic protein, transfecting the cultured ligament  
 CC cells with a nucleic acid sequence encoding a bone morphogenic protein or  
 CC a growth factor; treating the cultured ligament cells with a bone  
 CC morphogenic protein; and culturing the ligament cells for a time  
 CC sufficient to allow formation of a ligament cell-associated matrix, where  
 CC the ligament cell-associated matrix is chosen from type I collagen,  
 CC elastin, decorin and aggrecan. The invention further includes a  
 CC composition comprising cultured ligament cells and a bone morphogenic  
 CC protein. The method of the invention is useful for treating (repairing,  
 CC regenerating, forming or promoting) a ligament defect in a patient. This  
 CC sequence represents a bone morphogenic protein of the invention.

XX Sequence 431 AA;

Query Match 100.0%; Score 111; DB 8; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOINAI 20

DB 386 INPETHKPCCAPTOINAI 405

## RESULT 193

ADM80486

ID ADM80486 standard; protein; 431 AA.

XX ADM80486;

XX 03-JUN-2004 (first entry)  
DT  
XX Human osteogenic protein, OPl.  
DE  
XX human; osteogenic device; osteogenic protein, OPl; biocompatible matrix;  
KW endochondral bone formation; non-union fracture; cartilage formation;  
RW periodontal reconstructive procedure; dental reconstructive procedure;  
KW cartilage repair.  
OS  
XX Homo sapiens.  
PN US200322496-A1.  
PP  
XX 04-DEC-2003.  
PD  
XX 17-DEC-2002; 2002US-00321799.  
PF  
XX 08-APR-1988; 88US-00173406.  
PR 15-AUG-1988; 88US-00232630.  
PR 28-JAN-1992; 92US-00827052.  
PR 21-FEB-1992; 92US-00841646.  
PR 01-NOV-1993; 93US-00147023.  
PR 24-MAY-1995; 95US-00446999.  
PR 04-SEP-1998; 98US-00148925.  
XX  
XX (STYC ) STRYKER CORP.  
PA  
PI Opberman H, Ozkaynak E, Kuberamasampath T, Rueger DC, Pang RHL;  
XX WPI: 2004-167144/16.  
XX N-Psdb; ADM80485, ADM80487.  
DR  
XX Osteogenic device for implantation in mammal comprising osteogenic  
PT protein dispersed within biocompatible matrix; osteogenic protein  
PT comprising pair of unglycosylated protein chains, inducing endochondral  
PT bone formation.  
XX  
PS Disclosure; SEQ ID NO 2; 136pp; English.  
XX  
XX The invention relates to an osteogenic device for implantation in mammal,  
CC comprising osteogenic protein dispersed within biocompatible matrix  
CC defining pores, differentiation, and proliferation of migratory  
CC progenitor cells from body of mammal, improvement where osteogenic  
CC protein comprises pair of unglycosylated protein chains disulfide bonded  
CC to produce dimeric species capable of inducing endochondral bone  
CC formation. The device is useful for inducing endochondral bone formation  
CC in a non-union fracture in a mammal, for inducing cartilage or  
CC reconstructive bone formation in a mammal, for use in periodontal or dental  
CC reconstructive procedures, for use in cartilage repair in a mammal, for  
CC use in endochondral bone reconstructive procedures. The device is useful  
CC for inducing cartilage or endochondral bone formation in a mammal  
CC comprising the step of implanting the mammal at a locus accessible to  
CC migratory progenitor cells. The device is useful for inducing local  
CC cartilage bone formation and endochondral bone formation in a non-union  
CC fracture in a mammal. The antibody capable of binding specifically to the  
CC osteogenic protein is useful for selectively extracting osteogenic  
CC protein from a mixture of molecules. The present sequence represents the  
CC amino acid sequence of the human osteogenic protein, OPl.  
XX  
SQ Sequence 431 AA.

Query Match 100.0%; Score 111; DB 8; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0

Oy 1 INPEIVKPCQCAPTOLNLAIS 20  
Db 386 INPEIVKPCQCAPTOLNLAIS 405

RESULT 194  
ADX90628

```

ID   ADK90628 standard; protein; 431 AA.
AC   ADK90628;
XX
DT   03-JUN-2004 (first entry)
DE
XX
DE   Human osteogenic protein 1 morphogen Segid 3.
KW   human; chronic renal failure; renal disorder; osteogenic protein; OP;
KW   bone morphogenetic protein; BMP; morphogen;
KW   angiotensin-converting enzyme inhibitor; ACE;
KW   angiotensin II receptor antagonist; AlIraA; end-stage renal disease; ESRD;
KW   chronic diabetic nephropathy; diabetic glomerulopathy;
KW   diabetic renal hypertrophy; hypertensive nephrosclerosis;
KW   hyperintensive glomerulosclerosis; chronic glomerulonephritis;
KW   hereditary nephritis; renal dysplasia; antidiabetic; nephrotropic;
KW   antiinflammatory; vasotropic.
XX
OS   Homo sapiens.
XX
PN   WO2004019876-A2.
PD
XX
PI   11-MAR-2004.
PF
XX
PR   28-AUG-2003; 2003WO-US026923.
PS
XX
PT   28-AUG-2002; 2002US-0406431P.
QA   (CURT-) CURIS INC.
PA   (UNITW ) UNITV WASHINGTON.
PI   Charette MF, Hruska KA, McCartney J;
XX
DR   MPI; 2004-282635/26.
DS   N-PSDB; ADK90642.
XX
PT   Treating or preventing chronic renal failure in mammal, comprises
XX
PT   conjointly administering osteogenic proteins/bone morphogenetic proteins
XX
PS   morphogen and angiotensin-converting enzyme inhibitor to mammal.
XX
PS   Claim 60; SEQ ID NO 3; 365pp; English.
XX
CC   This invention relates to a novel method for treating or preventing
CC   chronic renal failure and other associated mammalian renal disorders.
CC   Specifically, it refers to cojointly administering osteogenic protein
CC   (Op) or bone morphogenetic protein (BMP) morphogens with an angiotensin-
CC   converting enzyme (ACE) inhibitor, in particular the angiotensin II
CC   receptor antagonist/ blocker (AlIraA). The present invention describes
CC   using these compositions as inducers of proliferation and differentiation
CC   of renal tissue, and as such can be used to prevent, inhibit, delay or
CC   alleviate the progressive loss of renal function and the decline in
CC   glomerular filtration rate (GFR) characterised by chronic renal failure.
CC   Furthermore, they can be useful for treating conditions such as end-stage
CC   renal disease (ESRD), chronic diabetic nephropathy, diabetic
CC   glomerulopathy, diabetic renal hypertrophy, hypertensive nephrosclerosis,
CC   hyperintensive glomerulosclerosis, chronic glomerulonephritis, hereditary
CC   nephritic and renal dysplasia where the mammal is a kidney transplant
CC   recipient. Accordingly, compositions exhibit antidiabetic, nephrotropic,
CC   antiinflammatory and vasotropic activities. This polypeptide sequence is
CC   a human osteogenic protein 1 of the invention.
XX
SQ   Sequence 431 AA:
XX
Query Match          100.0%; Score 111; DB 8; Length 431;
Best Local Similarity 100.0%; Pred. No. 1,8e-06;
Matches    20; Conservative      0; Mismatches     0; Indels      0; Gaps      0;
Ox       1 INETVPKPCCAPQTQNAIS 20
Db       386 INETVPKPCCAPQTQNAIS 405

```

AD	ADM32623
ID	ADM32623 standard; protein; 431 AA.
XX	
AC	ADM32623;
XX	
DT	17-JUN-2004 (first entry)
XX	
DE	Prepro form of Human BMP-7.
XX	
KW	human; bone morphogenic protein; BMP-2; metal alloy;
KW	osteo-inductive protein; osteo-integration; bone formation; trauma;
KW	malignancy; dental defect; hip; elbow; spine; knee; finger; ankle;
KM	inflammation; immunogenicity; transformation; mesenchymal stem cell;
KM	osteoblast.
XX	
OS	Homo sapiens.
XX	
FH	Key Location/Qualifiers
FT	Peptide 1..29
FT	/label= Signal peptide
FT	Peptide 30..292
FT	/label= Propeptide
FT	Protein 293..431
FT	/label= hBMP7
XX	
FN	WO2004024199-A1.
PD	
PD	25-MAR-2004.
PR	09-JUL-2003; 2003WO-EP007439.
PR	10-SEP-2002; 2002EP-00020403.
XX	
XX	(SCIL-) SCIL TECHNOLOGY GMBH.
PA	
PI	Hellerbrand K, Beaucamp N, Kohmert U;
DR	WPI; 2004-294993/27.
XX	
PT	Production of devices useful for e.g. new bone formation in dental
PT	defects, involves coating carrier having metal or metal alloy surface
PT	with osteo-inductive protein solution and drying under reduced oxygen
PT	concentration.
PS	
PS	Disclosure; Page 15; 68pp; English.
XX	
CC	This sequence represents the prepro form of human bone morphogenic
CC	protein (BMP-7). This protein was used in the production of a device (D1)
CC	which involves contacting a solution (A) with a carrier (B) having a
CC	surface of metal or metal alloy to coat the surface with (B), and drying
CC	of the coated carrier. (A) comprises an osteoinductive protein. The
CC	process is carried out under a reduced concentration of oxygen
CC	(preferably less than 10 vol.%). The device may be used in the
CC	preparation of a pharmaceutical composition for osteo-integration and new
CC	bone formation in treatment of e.g. traumatic, malignant, artificial or
CC	dental defects, or for the treatment of hip, elbow, spine, knee, finger
CC	or ankle joint. The method eliminates undesirable side effects such as
CC	inflammation due to the enhanced immunogenicity of oxidized proteins; is
CC	less time-consuming and economical. The device manufactured by the
CC	present method is free of toxic substances. The device with the coating
CC	of osteo-inductive protein distributes the protein evenly and efficiently
CC	; initiates and stimulates the transformation of mesenchymal stem cells
CC	into osteoblasts, hence accelerates the bone formation.
XX	
SQ	Sequence 431 AA;
QY	Query Match 100.0%; Score 111, DB 8, length 431,
DB	Best Local Similarity 100.0%; Pred. No. 1.8e-06;
	Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0.

```

RESULT 196
AD036195
ID AD036195 standard; protein; 431 AA.
XX
XX ADO36195;
AC
XX
XX 29-JUL-2004 (first entry)
DT
XX Human transformation and differentiation factor-1 (TDF-1).
DE
XX memory stores atomic X-ray crystallographic coordinate; human;
XX transformation and differentiation factor-1; TDF-1;
XX morphogen analogue production; tissue morphogenic protein;
XX tissue morphogenic protei mimetic; solubility; stability;
XX protein co-ordinate data.
XX
XX Homo sapiens.
OS
XX
XX US2004093164-A1.
PN
XX
XX 13-MAY-2004.
PD
XX
XX 08-NOV-2002; 2002US-00290554.
PF
XX
XX 08-NOV-2002; 2002US-00290554.
PR
XX
XX (CARL/) CARLSON W D.
PA
XX (KECK/) KECK P C.
PI
XX Carlsson WD, Keck PC;
PI
XX
XX WPI; 2004-439217/41.
DR
XX
XX Computer system for producing tissue morphogenic protein analogs, has
PT memory to store atomic X-ray crystallographic coordinates defining
PT portion of human transformation and differentiation factor-1 (hTDF-1).
PT
XX Disclosure; SEQ ID NO 1; 82pp; English.
PS
XX
XX The invention describes memory stores atomic X-ray crystallographic
XX coordinates defining a portion of human transformation and
XX differentiation factor-1 (hTDF-1). A processor communicates with the
XX memory to generate a molecular model having a three-dimensional shape
XX representing portion of hTDF-1. Also described is a morphogen analogue
XX production method. The system is useful for designing, identifying and
XX producing molecules which act as functional mimetics of tissue
XX morphogenic protein, TDF-1. The molecule is designed with enhanced
XX solubility and stability under physiological condition. Also the
XX biological activity of the hTDF-1 in mammal is enhanced. This is the
XX amino acid sequence of human transformationand differentiation factor-1
XX (TDF-1).
XX
SQ Sequence 431 AA;
XX
Query Match 100.0%; Score 111; DB 8; Length 431;
Best Local Similarity 100.0%; Pred. No.1.be-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 INPETHPKCCAPTOLNAIS 20
DB 386 INPETHPKCCAPTOLNAIS 405
RESULT 197
AD049073
ID ADO49073 standard; protein; 431 AA.
XX
XX ADO49073;
AC
XX
XX 26-AUG-2004 (first entry)
DT
XX
```



RESULT 199  
 AAR44751  
 ID AAR44751 standard; protein; 484 AA.  
 XX  
 AC AAR44751;  
 XX  
 DT 25-MAR-2003 (revised)  
 DT 01-JUL-2002 (revised)  
 DT 06-JUN-1994 (first entry)  
 XX  
 DE Osteogenic fusion protein OPIC.  
 XX  
 KW Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;  
 KW vascularisation; mineralisation; differentiation.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT Region 1..53  
 FT /label= Leader sequence.  
 FT Region 61..316  
 FT /note= "Prepro form of OP1."  
 XX  
 PN US5266683-A.  
 XX  
 PD 30-NOV-1993.  
 XX  
 PF 21-FEB-1992; 92US-00841646.  
 XX  
 XX 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621888.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 XX  
 PA (STYC ) STRYKER CORP.  
 XX  
 PI Kubersampath T, Ozkaynak E, Rueger DC, Pang RHL, Oppermann H;  
 XX  
 DR WPI; 1993-395405/49.  
 DR N-PSDB; AAO53147.  
 XX  
 PT New pure mammalian osteogenic proteins - induce cartilage and  
 PT endochondral bone formation when in association with a matrix.  
 XX  
 PS Disclosure; Col 105-110; 128bp; English.  
 XX  
 CC The fusion protein encodes the entire prepro form of OP1 (AAR44746)  
 CC linked to a leader sequence (residues 1-53) suitable for promoting  
 CC expression in E. coli. The protein when in association with a matrix can  
 CC induce at the locus of an implant the full development cascade of  
 CC endochondral bone formation including vascularisation, mineralisation and  
 CC bone marrow differentiation. The osteogenic protein can also be used to  
 CC repair both bone and cartilage in the treatment of osteoarthritis.  
 CC (Updated on 01-JUL-2002 to add missing PA field.) (Updated on 25-MAR-2003  
 CC to correct PF field.) (Updated on 25-MAR-2003 to correct PR field.)  
 CC  
 XX Sequence 484 AA;  
 SQ  
 Query Match 100.0%; Score 111; DB 2; Length 484;  
 Best Local Similarity 100.0%; Pred. No. 2e-06;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTOLNAIS 20  
 DB 439 INPETHKPCCAPTOLNAIS 458  
 RESULT 200  
 AAR51657  
 ID AAR51657 standard; protein; 484 AA.  
 XX  
 AC AAR51657;  
 XX  
 DT 25-MAR-2003 (revised)  
 DT 01-JUL-2002 (revised)  
 DT 09-JUN-1995 (first entry)  
 XX  
 DE Osteogenic fusion protein 1C OPIC.  
 XX  
 KW Osteogenic protein 1C; OPIC; osteoarthritis; osteogenesis;  
 KW cartilage and endochondral bone formation; allograft repair;  
 KW periodontal, dental and craniofacial reconstruction;  
 KW non-union fracture repair.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT Peptide 1..53  
 FT /label= sig peptide  
 FT /note= "MLE leader sequence"  
 XX  
 PN US5354557-A.  
 XX  
 PD 11-OCT-1994.  
 XX  
 PF 18-DEC-1992; 92US-00993387.  
 XX  
 XX 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621888.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 XX  
 PA (STYC ) STRYKER CORP.  
 XX  
 PI Rueger DC, Kubersampath T, Ozkaynak E, Oppermann H;  
 XX  
 DR WPI; 1994-324521/40.  
 DR N-PSDB; AAO72713.  
 XX  
 PT Implantable device for inducing osteogenesis - comprises porous matrix  
 PT contg. non-glycosylated dimeric, di-sulphide linked osteogenic protein.  
 XX  
 PS Disclosure; Col 105-108; 128bp; English.  
 XX  
 CC AAO72713 encodes AAR51657 the osteogenic fusion protein 1C (OPIC) which  
 CC includes a MLE leader sequence suitable for promoting expression in E.  
 CC coli. Fragments of the osteogenic unglycosylated polypeptides produced  
 CC can be disulphide bonded to form dimers, which form an essential  
 CC component of an osteogenic protein. This protein is dispersed in a  
 CC biodegradable matrix which can be implanted into a mammalian bone marrow

CC cavity, here it can induce local cartilage, bone and endochondrial bone  
CC formation; and it can also accelerate allograft repair. This implant has  
CC the advantage of inducing all stages of bone formation and of having a  
CC higher specific activity than other known bioresorbable materials. The  
CC implant can be used to repair non-union fractures and cartilage; treat  
CC osteoarthritis; and aid in periodontal, dental or craniofacial  
CC reconstruction. (Updated on 01-JUL-2002 to add missing PA field.)  
CC (Updated on 25-MAR-2003 to correct PF field.) (Updated on 25-MAR-2003 to  
CC correct PR field.)  
XX

SO Sequence 484 AA;

Query Match 100.0%; Score 111; DB 2; Length 484;

Best Local Similarity 100.0%; Pred. No. 2e-06;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHPCCAPTQNLNAIS 20

DB 439 INPETHPCCAPTQNLNAIS 458

Search completed: October 26, 2004, 07:50:46  
Job time : 168 secs

GenCore version 5.1.6  
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CM protein - protein search, using sw model

Run on: October 26, 2004, 07:25:29 ; Search time 39 Seconds  
(without alignments)  
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Title: US-10-619-910-11

Perfect score: 111  
Sequence: 1 INPRTVFKPCAPQTQMAIS 20

Scoring table: BLOSUM62  
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Searched: 478139 seqs, 66318000 residues

Total number of hits satisfying chosen parameters: 478139

Minimum DB seq length: 0  
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Listing first 200 summaries

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5: /cgn2\_6/ptodata/1/iaa/PTUS.COMB.pep.\*  
6: /cgn2\_6/ptodata/1/iaa/backfile1.pep.\*

Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	111	100.0	20	4	US-09-439-7798-11 Sequence 11, App1
2	111	100.0	102	1	US-08-335-583C-47 Sequence 47, App1
3	111	100.0	102	2	US-08-288-508C-18 Sequence 18, App1
4	111	100.0	102	3	US-08-478-097A-16 Sequence 16, App1
5	111	100.0	102	3	US-08-289-222E-27 Sequence 27, App1
6	111	100.0	102	3	US-08-054-526B-27 Sequence 27, App1
7	111	100.0	102	3	US-08-931-658E-161 Sequence 161, App1
8	111	100.0	102	3	US-08-981-739-161 Sequence 161, App1
9	111	100.0	102	3	US-08-786-284A-1 Sequence 1, App1
10	111	100.0	102	4	US-09-128-026E-161 Sequence 161, App1
11	111	100.0	102	4	US-09-456-398-16 Sequence 16, App1
12	111	100.0	102	4	US-09-220-616-161 Sequence 161, App1
13	111	100.0	102	4	US-09-374-958C-55 Sequence 55, App1
14	111	100.0	102	4	US-09-220-527-161 Sequence 161, App1
15	111	100.0	102	4	US-09-220-407-161 Sequence 161, App1
16	111	100.0	102	4	US-09-386-450D-18 Sequence 18, App1
17	111	100.0	104	1	US-07-764-731B-8 Sequence 8, App1
18	111	100.0	104	1	US-07-374-958C-69 Sequence 69, App1
19	111	100.0	117	4	US-08-481-377-12 Sequence 12, App1
20	111	100.0	118	1	US-08-481-835-10 Sequence 10, App1
21	111	100.0	118	2	US-09-153-733A-12 Sequence 12, App1
22	111	100.0	118	3	US-08-946-092A-10 Sequence 10, App1
23	111	100.0	118	3	US-09-172-062-10 Sequence 10, App1
24	111	100.0	118	3	US-09-301-520D-10 Sequence 10, App1
25	111	100.0	118	3	US-09-389-705-12 Sequence 12, App1
26	111	100.0	118	5	PCT-US94-00666-12 Sequence 12, App1
27	111	100.0	118	5	PCT-US94-00685-10 Sequence 10, App1

28	111	100.0	119	1	US-08-581-529B-12 Sequence 12, App1
29	111	100.0	119	2	US-08-455-559-18 Sequence 18, App1
30	111	100.0	119	2	US-08-525-596B-22 Sequence 22, App1
31	111	100.0	119	2	US-08-581-528A-12 Sequence 12, App1
32	111	100.0	119	3	US-09-097-616-12 Sequence 12, App1
33	111	100.0	119	3	US-08-177-860A-22 Sequence 22, App1
34	111	100.0	119	3	US-08-624-635-13 Sequence 13, App1
35	111	100.0	119	3	US-09-145-060-18 Sequence 18, App1
36	111	100.0	119	4	US-09-378-238-26 Sequence 26, App1
37	111	100.0	119	4	US-09-629-938-12 Sequence 12, App1
38	111	100.0	119	4	US-09-686-344-10 Sequence 40, App1
39	111	100.0	119	4	US-09-412-791D-12 Sequence 12, App1
40	111	100.0	119	4	US-09-061-12 Sequence 12, App1
41	111	100.0	119	5	PCT-US94-00657-18 Sequence 18, App1
42	111	100.0	119	5	PCT-US94-07762-12 Sequence 12, App1
43	111	100.0	119	5	PCT-US94-07799-12 Sequence 2, App1
44	111	100.0	139	1	US-07-718-274A-2 Sequence 2, App1
45	111	100.0	139	1	US-08-163-877-10 Sequence 10, App1
46	111	100.0	139	1	US-08-149-106-2 Sequence 2, App1
47	111	100.0	139	1	US-08-298-021-2 Sequence 2, App1
48	111	100.0	139	1	US-08-278-729A-5 Sequence 5, App1
49	111	100.0	139	1	US-08-155-343A-5 Sequence 5, App1
50	111	100.0	139	1	US-08-406-672-5 Sequence 5, App1
51	111	100.0	139	1	US-08-643-563A-5 Sequence 5, App1
52	111	100.0	139	1	US-08-643-763A-5 Sequence 5, App1
53	111	100.0	139	1	US-08-462-623-5 Sequence 5, App1
54	111	100.0	139	1	US-08-451-953A-5 Sequence 5, App1
55	111	100.0	139	1	US-08-360-914B-10 Sequence 10, App1
56	111	100.0	139	1	US-08-741-589A-10 Sequence 10, App1
57	111	100.0	139	2	US-08-445-468A-5 Sequence 5, App1
58	111	100.0	139	2	US-08-461-397A-5 Sequence 5, App1
59	111	100.0	139	2	US-08-912-088-5 Sequence 5, App1
60	111	100.0	139	2	US-08-278-730A-5 Sequence 5, App1
61	111	100.0	139	3	US-08-445-467-1 Sequence 1, App1
62	111	100.0	139	3	US-08-443-676-1 Sequence 1, App1
63	111	100.0	139	3	US-08-480-515A-5 Sequence 5, App1
64	111	100.0	139	3	US-08-271-033A-5 Sequence 3, App1
65	111	100.0	139	3	US-08-421-556A-3 Sequence 3, App1
66	111	100.0	139	3	US-08-440-894A-5 Sequence 5, App1
67	111	100.0	139	3	US-09-170-936-5 Sequence 5, App1
68	111	100.0	139	3	US-08-868-452-46 Sequence 46, App1
69	111	100.0	139	3	US-08-461-113-5 Sequence 5, App1
70	111	100.0	139	3	US-08-456-033-5 Sequence 5, App1
71	111	100.0	139	4	US-08-643-321-4 Sequence 4, App1
72	111	100.0	139	4	US-09-464-206-5 Sequence 5, App1
73	111	100.0	139	4	US-08-404-113A-5 Sequence 5, App1
74	111	100.0	139	4	US-09-882-875A-1 Sequence 1, App1
75	111	100.0	139	4	US-09-374-956C-68 Sequence 68, App1
76	111	100.0	139	5	PCT-US92-0196B-5 Sequence 5, App1
77	111	100.0	139	5	PCT-US93-07190-5 Sequence 5, App1
78	111	100.0	139	5	PCT-US93-07231-5 Sequence 5, App1
79	111	100.0	139	5	PCT-US93-08742-5 Sequence 5, App1
80	111	100.0	139	5	PCT-US93-08808-5 Sequence 5, App1
81	111	100.0	139	5	PCT-US93-08885-5 Sequence 5, App1
82	111	100.0	139	5	PCT-US94-13101-10 Sequence 10, App1
83	111	100.0	161	2	US-08-621-803-249 Sequence 249, App1
84	111	100.0	161	2	US-09-271-970-2 Sequence 2, App1
85	111	100.0	161	3	US-09-217-352-249 Sequence 249, App1
86	111	100.0	161	3	US-09-760-397-2 Sequence 2, App1
87	111	100.0	169	1	US-07-841-646-9 Sequence 9, App1
88	111	100.0	169	1	US-08-147-023-9 Sequence 9, App1
89	111	100.0	169	1	US-08-447-570-9 Sequence 9, App1
90	111	100.0	169	2	US-08-449-700-9 Sequence 9, App1
91	111	100.0	169	2	US-08-449-699A-9 Sequence 9, App1
92	111	100.0	169	4	US-08-957-425-9 Sequence 9, App1
93	111	100.0	178	3	US-09-271-970-8 Sequence 8, App1
94	111	100.0	178	3	US-09-760-397-8 Sequence 8, App1
95	111	100.0	179	2	US-08-621-803-257 Sequence 257, App1
96	111	100.0	179	2	US-08-621-803-257 Sequence 257, App1
97	111	100.0	179	3	US-09-217-352-261 Sequence 261, App1
98	111	100.0	179	3	US-09-217-352-261 Sequence 261, App1
99	111	100.0	190	3	US-09-271-970-14 Sequence 14, App1
100	111	100.0	190	3	US-09-271-970-14 Sequence 14, App1

[illegible]



TITLE OF INVENTION: ANTI-DORSALIZING MORPHOGENETIC PROTEIN  
NUMBER OF SEQUENCES: 56  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Knobbe, Martens, Olson and Bear  
STREET: 620 Newport Center Drive 16th Floor  
CITY: Newport Beach  
STATE: CA  
COUNTRY: USA  
ZIP: 92660  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
OPERATING SYSTEM: DOS  
SOFTWARE: FASTSEQ Version 1.5  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/335,583C  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: Altman, Daniel E  
REGISTRATION NUMBER: 34,115  
REFERENCE/DOCKET NUMBER: NIH04.001A  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 714-760-0404  
TELEFAX: 714-760-9502  
TELEX:  
INFORMATION FOR SEQ ID NO: 47:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acids  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: peptide  
HYPOTHETICAL: NO  
ANTI-SENSE: NO  
FRAGMENT TYPE: C-terminal  
ORIGINAL SOURCE:  
US-08-335-583C-47

Query Match 100.0%; Score 111; DB 1; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5,5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQOLNAIS 20  
DB 57 INPETHKPCAPQOLNAIS 76

RESULT 3  
US-08-288-508C-18  
Sequence 18, Application US/08288508C  
Patent No. 5994094  
GENERAL INFORMATION:  
APPLICANT: H tien, Gertrud  
APPLICANT: Neidhardt, Helge  
APPLICANT: Paulista, Michael  
TITLE OF INVENTION: NEW GROWTH/DIFFERENTIATING FACTOR OF  
TITLE OF INVENTION: THE TGF- FAMILY  
NUMBER OF SEQUENCES: 40  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Nikaido, Marmelstein, Murray & Oram LLP  
STREET: 655 Fifteenth Street N.W. Suite 330  
CITY: Washington  
STATE: D.C.  
COUNTRY: U.S.A.  
ZIP: 20003-5701  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/288,508C  
FILING DATE: 10-AUG-1994  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: DE P 43 26 829.3  
FILING DATE: 10-AUG-1993  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: DE P 44 18 222.8  
FILING DATE: 25-MAY-1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: DE P 44 20 157.5  
FILING DATE: 09-JUN-1994  
ATTORNEY/AGENT INFORMATION:  
NAME: JAHNS, Kristina M.  
REGISTRATION NUMBER: P-41,092  
REFERENCE/DOCKET NUMBER: P564-4019  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (202) 638-5000  
TELEFAX: (202) 638-4810  
INFORMATION FOR SEQ ID NO: 18:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-288-508C-18

Query Match 100.0%; Score 111; DB 2; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5,5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQOLNAIS 20  
DB 57 INPETHKPCAPQOLNAIS 76

RESULT 4  
US-08-478-097A-16  
Sequence 16, Application US/08478097A  
Patent No. 6040431  
GENERAL INFORMATION:  
APPLICANT: KECK, PETER  
APPLICANT: SMART, JOHN  
TITLE OF INVENTION: SINGLE-CHAIN ANALOGS OF TGF-B  
TITLE OF INVENTION: SUPERFAMILY (MORPHONS)  
NUMBER OF SEQUENCES: 45  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, TESTA, HURWITZ &  
ADDRESSEE: THIBEAULT, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/478,097A  
FILING DATE:  
CLASSIFICATION: 530  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ, EDYUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-060  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-248-7000  
TELEFAX: 617-248-7100  
INFORMATION FOR SEQ ID NO: 16:

SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..102  
OTHER INFORMATION: /note="OP-1 SEQUENCE"  
US-08-478-097A-16

Query Match 100.0%; Score 111; DB 3; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 57 INPETHKPCCAPTOLNAIS 76

RESULT 5  
US-08-289-222E-27  
Sequence 27, Application US/08289222E  
Patent No. 6120760  
GENERAL INFORMATION:  
APPLICANT: HOTTEN, GERTRUD  
APPLICANT: NEIDHARDT, HELGE  
APPLICANT: BECHTOLD, ROLF  
APPLICANT: POHL, JENS  
TITLE OF INVENTION: GROWTH/DIFFERENTIATION FACTORS OF THE TGF-B  
TITLE OF INVENTION: FAMILY  
NUMBER OF SEQUENCES: 53  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: NIKAIKO, MARVELSTEIN, MURRAY & ORAM  
STREET: 655 FIFTEENTH STREET, N. W., G STREET LOBBY,  
SUITE 330  
CITY: WASHINGTON  
STATE: DC  
COUNTRY: USA  
ZIP: 20005-5701  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/289,222E  
FILING DATE: 25-AUG-1999  
CLASSIFICATION: 424  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/289,222  
FILING DATE: 12-AUG-1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: DE P 44 23 190.3  
FILING DATE: 07-JUL-1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: EPO 92102324.8  
FILING DATE: 12-FEB-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: PCT/EP93/00350  
FILING DATE: 12-FEB-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: KITTS, MONICA CHIN  
REGISTRATION NUMBER: 36,105  
REFERENCE/DOCKET NUMBER: P564-9021  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 202/638-5000  
TELEFAX: 202/638-4810  
INFORMATION FOR SEQ ID NO: 27:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid

STRANDEDNESS:  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-289-222E-27

Query Match 100.0%; Score 111; DB 3; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 57 INPETHKPCCAPTOLNAIS 76

RESULT 6  
US-09-054-526B-27  
Sequence 27, Application US/09054526B  
Patent No. 6197550  
GENERAL INFORMATION:  
APPLICANT: HOTTEN, GERTRUD  
APPLICANT: NEIDHARDT, HELGE  
APPLICANT: BECHTOLD, ROLF  
APPLICANT: POHL, JENS  
TITLE OF INVENTION: DNA SEQUENCES ENCODING NOVEL  
TITLE OF INVENTION: GROWTH/DIFFERENTIATION FACTORS  
NUMBER OF SEQUENCES: 53  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: NIKAIKO, MARVELSTEIN, MURRAY & ORAM LLP  
STREET: 655 FIFTEENTH STREET, N. W., G STREET LOBBY,  
SUITE 330  
CITY: WASHINGTON  
STATE: DC  
COUNTRY: USA  
ZIP: 20005-5701  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/054,526B  
FILING DATE: 03-APR-1998  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/289,222  
FILING DATE: 12-AUG-1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: DE P 44 23 190.3  
FILING DATE: 01-JUL-1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: EPO 92102324.8  
FILING DATE: 12-FEB-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: PCT/EP93/00350  
FILING DATE: 12-FEB-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: KITTS, MONICA CHIN  
REGISTRATION NUMBER: 36,105  
REFERENCE/DOCKET NUMBER: P564-8005  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 202/638-5000  
TELEFAX: 202/638-4810  
INFORMATION FOR SEQ ID NO: 27:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: linear  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-054-526B-27

Query Match 100.0%; Score 111; DB 3; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 57 INPETHKPCCAPTOLNAIS 76

## RESULT 7

US-08-931-858E-161  
Sequence 161, Application US/08931858E  
Patent No. 6222022  
GENERAL INFORMATION:  
APPLICANT: JOHNSON, EUGENE M.  
APPLICANT: MILBRANDT, JEFFREY D.  
APPLICANT: KOTZBAUER, PAUL T.  
APPLICANT: LAMPE, PATRICIA A.  
APPLICANT: KLEIN, ROBERT  
APPLICANT: DESAUVAGE, FRED  
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTOR  
NUMBER OF SEQUENCES: 239  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: HOWELL & HAFERKAMP, L.C.  
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400  
CITY: ST. LOUIS  
STATE: MO  
COUNTRY: USA  
ZIP: 63105  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
OPERATING SYSTEM: IBM PC compatible  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/931,858E  
FILING DATE:  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: HOLLAND, DONALD R.  
REGISTRATION NUMBER: 35,197  
REFERENCE/DOCKET NUMBER: 971486  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 314-727-5188  
TELEFAX: 314-727-6092  
INFORMATION FOR SEQ ID NO: 161:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: peptide  
US-08-931-858E-161

Query Match 100.0%; Score 111; DB 3; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 57 INPETHKPCCAPTOLNAIS 76

## RESULT 8

US-08-981-739-161  
Sequence 161, Application US/08981739  
Patent No. 6232449  
GENERAL INFORMATION:  
APPLICANT: JOHNSON JR., EUGENE M.  
APPLICANT: MILBRANDT, JEFFREY D.  
APPLICANT: KOTZBAUER, PAUL T.  
APPLICANT: LAMPE, PATRICIA A.  
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTORS  
NUMBER OF SEQUENCES: 176  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: HOWELL & HAFERKAMP, L.C.

STREET: 7733 FORSYTH BOULEVARD, SUITE 1400.  
CITY: ST. LOUIS  
STATE: MISSOURI  
COUNTRY: US  
ZIP: 63105-1817

## COMPUTER READABLE FORM:

MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/981,739  
FILING DATE: 31-Aug-1998  
CLASSIFICATION: <unknown>

## PRIOR APPLICATION DATA:

APPLICATION NUMBER: PCT/US97/03461  
FILING DATE: <unknown>

## ATTORNEY/AGENT INFORMATION:

NAME: HOLLAND, DONALD R.  
REGISTRATION NUMBER: 35,197  
REFERENCE/DOCKET NUMBER: 976163  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (314) 727-5188  
TELEFAX: (314) 727-6092

## INFORMATION FOR SEQ ID NO: 161:

## SEQUENCE CHARACTERISTICS:

LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: peptide  
SEQUENCE DESCRIPTION: SEQ ID NO: 161:  
US-08-981-739-161

Query Match 100.0%; Score 111; DB 3; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 57 INPETHKPCCAPTOLNAIS 76

## RESULT 9

US-08-786-284A-1  
Sequence 1, Application US/08786284A  
Patent No. 6273598  
GENERAL INFORMATION:  
APPLICANT: KECK, PETER  
APPLICANT: GRIFFITH, DIANA L.  
APPLICANT: CARLSON, WILLIAM D.  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: SAMPATH, KUBER T.  
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR PRODUCING  
NUMBER OF SEQUENCES: 8  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES,  
INC.  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/786,284A  
FILING DATE:  
CLASSIFICATION: 364

ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-102  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-0992  
INFORMATION FOR SEQ ID NO: 1:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..102  
OTHER INFORMATION: /product= "hdp-1"  
US-08-786-284A-1

Query Match 100.0%; Score 111; DB 3; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5,5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNAIS 20  
DB 57 INPETHKPCCAPTOLNAIS 76

RESULT 10  
US-08-128-026-161  
Sequence 161, Application US/09128026  
Patent No. 640335  
GENERAL INFORMATION:  
APPLICANT: JOHNSON JR., EUGENE M.  
APPLICANT: MILBRANDT, JEFFREY D.  
APPLICANT: KOTZBAUER, PAUL T.  
APPLICANT: LAMPE, PATRICIA A.  
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTORS  
NUMBER OF SEQUENCES: 176  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: HOWELL & HAERKAMP, L.C.  
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400  
CITY: ST. LOUIS  
STATE: MISSOURI  
COUNTRY: US  
ZIP: 63105-1817  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/128,026  
FILING DATE:  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: HOLLAND, DONALD R.  
REGISTRATION NUMBER: 35,197  
REFERENCE/DOCKET NUMBER: 976163  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (314) 727-6092  
TELEFAX: (314) 727-6092  
INFORMATION FOR SEQ ID NO: 161:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: peptide  
US-09-128-026-161

Query Match 100.0%; Score 111; DB 4; Length 102;

Best Local Similarity 100.0%; Pred. No. 5,5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNAIS 20  
DB 57 INPETHKPCCAPTOLNAIS 76

RESULT 11  
US-09-496-398-16  
Sequence 16, Application US/09496398  
Patent No. 6479643  
GENERAL INFORMATION:  
APPLICANT: KECK, PETER  
APPLICANT: SMART, JOHN  
TITLE OF INVENTION: SINGLE CHAIN ANALOGS OF TGF-B  
TITLE OF INVENTION: SUPERFAMILY (MORPHONS)  
NUMBER OF SEQUENCES: 45  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, TESTA, HUEWITZ &  
ADDRESSEE: THIEBAULT, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/496,398  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/478,097  
FILING DATE: 07-JUN-1995  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: STK-059CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-248-7000  
TELEFAX: 617-248-7100  
INFORMATION FOR SEQ ID NO: 16:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..102  
OTHER INFORMATION: /note= "OP-1 SEQUENCE"  
US-09-496-398-16

Query Match 100.0%; Score 111; DB 4; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5,5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNAIS 20  
DB 57 INPETHKPCCAPTOLNAIS 76

RESULT 12  
US-09-220-616-161  
Sequence 161, Application US/09220616  
Patent No. 6645937  
GENERAL INFORMATION:

APPLICANT: JOHNSON JR., EUGENE M.  
APPLICANT: MILBRANDT, JEFFREY D.  
APPLICANT: KOTZBAUER, PAUL T.  
APPLICANT: LAMPE, PATRICIA A.  
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTORS  
NUMBER OF SEQUENCES: 176  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: HOWELL & HAFERKAMP, L.C.  
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400  
CITY: ST. LOUIS  
STATE: MISSOURI  
COUNTRY: US  
ZIP: 63105-1817  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/220,616  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/981,739  
FILING DATE: 31-Aug-1998  
APPLICATION NUMBER: PCT/US97/03461  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: HOLLAND, DONALD R.  
REGISTRATION NUMBER: 35,197  
REFERENCE/DOCKET NUMBER: 976163  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (314) 727-5188  
TELEFAX: (314) 727-6092  
INFORMATION FOR SEQ ID NO: 161:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: peptide  
US-09-220-616-161

Query Match 100.0%; Score 111; DB 4; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNAIS 20  
Db 57 INPETHKPCCAPTQLNAIS 76

RESULT 13  
US-09-374-958C-55  
Sequence 55, Application US/09374958C  
Patent No. 6677432  
GENERAL INFORMATION:  
APPLICANT: Stryker Corporation  
TITLE OF INVENTION: Modified Proteins and DNAs of the TGF-beta Superfamily, including  
FILE REFERENCE: STR-076  
CURRENT APPLICATION NUMBER: US/09/374,958C  
CURRENT FILING DATE: 1999-08-16  
NUMBER OF SEQ ID NOS: 90  
SOFTWARE: Patentin version 2.0  
SEQ ID NO 55  
LENGTH: 102  
TYPE: PRT  
ORGANISM: Homo sapiens  
FEATURE:  
OTHER INFORMATION: OP-1  
US-09-374-958C-55

Query Match 100.0%; Score 111; DB 4; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNAIS 20  
Db 57 INPETHKPCCAPTQLNAIS 76

RESULT 14  
US-09-220-527-161  
Sequence 161, Application US/09220527  
Patent No. 6692943  
GENERAL INFORMATION:  
APPLICANT: JOHNSON JR., EUGENE M.  
MILBRANDT, JEFFREY D.  
KOTZBAUER, PAUL T.  
LAMPE, PATRICIA A.  
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTORS  
NUMBER OF SEQUENCES: 176  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: HOWELL & HAFERKAMP, L.C.  
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400  
CITY: ST. LOUIS  
STATE: MISSOURI  
COUNTRY: US  
ZIP: 63105-1817  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/220,527  
FILING DATE: 24-Dec-1998  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/981,739  
FILING DATE: 31-Aug-1998  
APPLICATION NUMBER: PCT/US97/03461  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: HOLLAND, DONALD R.  
REGISTRATION NUMBER: 35,197  
REFERENCE/DOCKET NUMBER: 976163  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (314) 727-5188  
TELEFAX: (314) 727-6092  
INFORMATION FOR SEQ ID NO: 161:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: peptide  
SEQUENCE DESCRIPTION: SEQ ID NO: 161:  
US-09-220-527-161

Query Match 100.0%; Score 111; DB 4; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNAIS 20  
Db 57 INPETHKPCCAPTQLNAIS 76

RESULT 15  
US-09-220-407-161  
Sequence 161, Application US/09220407  
Patent No. 671600  
GENERAL INFORMATION:  
APPLICANT: JOHNSON, EUGENE M

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; APPLICANT: MILBRANDT, JEFFREY D
; APPLICANT: KOTZBAUER, PAUL T
; APPLICANT: LAMPE, PATRICIA A
; APPLICANT: KLEIN, ROBERT
; APPLICANT: DESAUVAGE, FRED
; TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTOR
; NUMBER OF SEQUENCES: 239
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: HOWELL & HAFERKAMP, L.C.
; STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
; CITY: ST. LOUIS
; STATE: MO
; COUNTRY: USA
; ZIP: 63105
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/220,407
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/931,858
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: HOLLAND, DONALD R.
; REGISTRATION NUMBER: 35,197
; REFERENCE/DOCKET NUMBER: 971486
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 314-727-5188
; TELEFAX: 314-727-6092
; INFORMATION FOR SEQ ID NO: 161:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 102 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; US-09-220-407-161

Query Match          100.0%; Score 111; DB 4; Length 102;
Best Local Similarity 100.0%; Pred. No. 5.5e-08;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
Db 57 INPETHKPCCAPTOLNAIS 76

RESULT 16
US-09-386-450D-18
; Sequence 18, Application US/09386450D
; Patent No. 6764994
; GENERAL INFORMATION:
; APPLICANT: Hotten, Gertrud
; APPLICANT: Neidhardt, Helge
; APPLICANT: Paulista, Michael
; TITLE OF INVENTION: NEW GROWTH/DIFFERENTIATING FACTOR OF TGF-? Family
; FILE REFERENCE: 100564-09022
; CURRENT APPLICATION NUMBER: US/09/386,450D
; CURRENT FILING DATE: 1999-08-31
; PRIOR APPLICATION NUMBER: US 08/288,508
; PRIOR FILING DATE: 1994-08-10
; PRIOR APPLICATION NUMBER: DE P 43 26 829.3
; PRIOR FILING DATE: 1993-08-10
; PRIOR APPLICATION NUMBER: DE P 44 18 222.8
; PRIOR FILING DATE: 1994-05-25
; PRIOR APPLICATION NUMBER: DE P 44 20 157.5
; PRIOR FILING DATE: 1994-06-09
; NUMBER OF SEQ ID NOS: 41
; SOFTWARE: PatentIn version 3.0

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; SEQ ID NO 18
; LENGTH: 102
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: DOMAIN
; LOCATION: (1)..(102)
; OTHER INFORMATION: portion of BMP 7 corresponding to MP 52
; US-09-386-450D-18

Query Match          100.0%; Score 111; DB 4; Length 102;
Best Local Similarity 100.0%; Pred. No. 5.5e-08;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
Db 57 INPETHKPCCAPTOLNAIS 76

RESULT 17
US-07-764-731B-8
; Sequence 8, Application US/07764731B
; Patent No. 5366875
; GENERAL INFORMATION:
; APPLICANT: Rosen, Vicki A.
; APPLICANT: Wang, Elizabeth A.
; APPLICANT: Wozney, John M.
; TITLE OF INVENTION: Methods for Producing BMP-7 Proteins
; NUMBER OF SEQUENCES: 10
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Legal Affairs, Genetics Institute, Inc.
; STREET: 87 Cambridgepark Drive
; CITY: Cambridge
; STATE: MA
; COUNTRY: USA
; ZIP: 02140
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/764,731B
; FILING DATE: 19910924
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Kapinos, Ellen J.
; REGISTRATION NUMBER: 32,245
; REFERENCE/DOCKET NUMBER: G15159B
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-876-1170
; TELEFAX: 617-876-5851
; INFORMATION FOR SEQ ID NO: 8:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 104 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-07-764-731B-8

Query Match          100.0%; Score 111; DB 1; Length 104;
Best Local Similarity 100.0%; Pred. No. 5.6e-08;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
Db 59 INPETHKPCCAPTOLNAIS 78

RESULT 18
US-09-374-958C-69
; Sequence 69, Application US/09374958C
; Patent No. 6677432

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GENERAL INFORMATION:  
APPLICANT: Stryker Corporation  
TITLE OF INVENTION: Modified Proteins and DNAs of the TGF-beta Superfamily, including  
TITLE OF INVENTION: Modified Morphogenic Proteins  
FILE REFERENCE: STK-076  
CURRENT APPLICATION NUMBER: US/09/374,958C  
CURRENT FILING DATE: 1999-08-16  
NUMBER OF SEQ ID NOS: 90  
SOFTWARE: Patentin version 2.0  
SEQ ID NO 69  
LENGTH: 117  
TYPE: PRT  
ORGANISM: Homo sapiens  
FEATURE:  
OTHER INFORMATION: Trypsin truncated H2223 mutant  
US-09-374-958C-69

Query Match 100.0%; Score 111; DB 4; Length 117;  
Best Local Similarity 100.0%; Pred. No. 6.3e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
|||  
72 INPETHKPCCAPTOLNAIS 91

Db

RESULT 19  
US-08-481-377-12  
Sequence 12, Application US/08481377  
Patent No. 5808007  
GENERAL INFORMATION:  
APPLICANT: JOHNS HOPKINS UNIVERSITY  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3  
NUMBER OF SEQUENCES: 29  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: SPENSLEY HORN JUBAS & LUBITZ  
STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR  
CITY: LOS ANGELES  
STATE: CALIFORNIA  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/481.377  
FILING DATE:  
CLASSIFICATION: 514  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: PCT/US94/00666  
FILING DATE: 12-JAN-1994  
ATTORNEY/AGENT INFORMATION:  
NAME: WETHERELL, JR. Ph.D., JOHN R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: FD2279 PCT  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 12:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 118 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..118  
US-08-481-377-12

Query Match 100.0%; Score 111; DB 1; Length 118;  
Best Local Similarity 100.0%; Pred. No. 6.3e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
|||  
73 INPETHKPCCAPTOLNAIS 92

Db

RESULT 20  
US-08-491-835-10  
Sequence 10, Application US/08491835  
Patent No. 5821056  
GENERAL INFORMATION:  
APPLICANT: THE JOHNS HOPKINS UNIVERSITY  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9  
NUMBER OF SEQUENCES: 26  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Spensley Horn Jubas & Lubitz  
STREET: 1880 Century Park East, Suite 500  
CITY: Los Angeles  
STATE: California  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/491.835  
FILING DATE: 23-OCT-1995  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: PCT/US94/00685  
FILING DATE: 12-JAN-1994  
ATTORNEY/AGENT INFORMATION:  
NAME: Wetherell, Jr. Ph.D., John R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: FD3288  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 10:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 118 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..118  
US-08-491-835-10

Query Match 100.0%; Score 111; DB 2; Length 118;  
Best Local Similarity 100.0%; Pred. No. 6.3e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
|||  
Db 73 INPETHKPCCAPTOLNAIS 92

RESULT 21  
US-09-153-733A-12  
Sequence 12, Application US/09153733A  
Patent No. 6025475  
GENERAL INFORMATION:  
APPLICANT: JOHNS HOPKINS UNIVERSITY

TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3  
NUMBER OF SEQUENCES: 29  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: SPENSLEY HORN JUBAS & LUBITZ  
STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR  
CITY: LOS ANGELES  
STATE: CALIFORNIA  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/153.733A  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/481.377  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: WETHERELL, JR. Ph.D., JOHN R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: FD2279 PCT  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 12:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 118 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..118  
US-09-153-733A-12

Query Match 100.0%; Score 111; DB 3; Length 118;  
Best Local Similarity 100.0%; Pred. No. 6.3e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 73 INPETHKPCCAPTOLNAIS 92

RESULT 22  
US-08-946-092A-10  
Sequence 10, Application US/08946092A  
Patent No. 6030617  
GENERAL INFORMATION:  
APPLICANT: THE JOHNS HOPKINS UNIVERSITY  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9  
NUMBER OF SEQUENCES: 26  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Spensley Horn Jubas & Lubitz  
STREET: 1880 Century Park East, Suite 500  
CITY: Los Angeles  
STATE: California  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/946.092A

FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/491.835  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: Wetherell, Jr. Ph.D., John R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: FD3288  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 10:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 118 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..118  
US-08-946-092A-10

Query Match 100.0%; Score 111; DB 3; Length 118;  
Best Local Similarity 100.0%; Pred. No. 6.3e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 73 INPETHKPCCAPTOLNAIS 92

RESULT 23  
US-09-172-062-10  
Sequence 10, Application US/09172062  
Patent No. 6191261  
GENERAL INFORMATION:  
APPLICANT: THE JOHNS HOPKINS UNIVERSITY  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9  
NUMBER OF SEQUENCES: 26  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Spensley Horn Jubas & Lubitz  
STREET: 1880 Century Park East, Suite 500  
CITY: Los Angeles  
STATE: California  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/172.062  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/491.835  
FILING DATE: 23-OCT-1995  
APPLICATION NUMBER: PCT/US94/00685  
FILING DATE: 12-JAN-1994  
ATTORNEY/AGENT INFORMATION:  
NAME: Wetherell, Jr. Ph.D., John R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: FD3288  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 10:  
SEQUENCE CHARACTERISTICS:



LENGTH: 118 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..118  
US-09-172-062-10

Query Match 100.0%; Score 111; DB 3; Length 118;  
Best Local Similarity 100.0%; Pred. No. 6.3e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 73 INPETHKPCCAPTOLNAIS 92

RESULT 24  
US-09-301-520D-10  
Sequence 10, Application US/09301520D  
Patent No. 6365402  
GENERAL INFORMATION:  
APPLICANT: THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE  
APPLICANT: LEE, Se-Jin  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9  
FILE REFERENCE: JH1190-3  
CURRENT APPLICATION NUMBER: US/09/301,520D  
CURRENT FILING DATE: 1999-04-28  
PRIOR APPLICATION NUMBER: US 09/172,062  
PRIOR FILING DATE: 1998-10-13  
PRIOR APPLICATION NUMBER: US 08/491,835  
PRIOR FILING DATE: 1995-10-23  
PRIOR APPLICATION NUMBER: PCT/US94/00665  
PRIOR FILING DATE: 1994-01-12  
PRIOR APPLICATION NUMBER: US 08/003,303  
PRIOR FILING DATE: 1993-01-12  
NUMBER OF SEQ ID NOS: 28  
SOFTWARE: PatentIn version 3.0  
SEQ ID NO 10  
LENGTH: 118  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-301-520D-10

Query Match 100.0%; Score 111; DB 3; Length 118;  
Best Local Similarity 100.0%; Pred. No. 6.3e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 73 INPETHKPCCAPTOLNAIS 92

RESULT 25  
US-09-389-705-12  
Sequence 12, Application US/09389705  
Patent No. 6391565  
GENERAL INFORMATION:  
APPLICANT: JOHNS HOPKINS UNIVERSITY  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3  
NUMBER OF SEQUENCES: 29  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: SPENSLEY HORN JUBAS & LUBITZ  
STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR  
CITY: LOS ANGELES  
STATE: CALIFORNIA  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/389,705  
FILING DATE: 03-Sep-1999  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 09/153,733  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: WETHERELL, JR. Ph.D., JOHN R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: FD2279 PCT  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 12:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 118 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..118  
US-09-389-705-12

Query Match 100.0%; Score 111; DB 3; Length 118;  
Best Local Similarity 100.0%; Pred. No. 6.3e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 73 INPETHKPCCAPTOLNAIS 92

RESULT 26  
PCT-US94-00666-12  
Sequence 12, Application PC/TUS9400666  
GENERAL INFORMATION:  
APPLICANT: JOHNS HOPKINS UNIVERSITY  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3  
NUMBER OF SEQUENCES: 29  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: SPENSLEY HORN JUBAS & LUBITZ  
STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR  
CITY: LOS ANGELES  
STATE: CALIFORNIA  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US94/00666  
FILING DATE: 12-JAN-1994  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: WETHERELL, JR. Ph.D., JOHN R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: FD2279 PCT  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 12:

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SEQUENCE CHARACTERISTICS:
LENGTH: 118 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
IMMEDIATE SOURCE:
CLONE: OP-1
FEATURE:
NAME/KEY: Protein
LOCATION: 1..118
PCT-US94-00666-12

Query Match      100.0%; Score 111; DB 5; Length 118;
Best Local Similarity 100.0%; Pred. No. 6.3e-08;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
DB 73 INPETHKPCCAPTOLNAIS 92

RESULT 27
PCT-US94-00685-10
Sequence 10, Application PC/TUS9400685
GENERAL INFORMATION:
APPLICANT: THE JOHNS HOPKINS UNIVERSITY
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9
NUMBER OF SEQUENCES: 26
CORRESPONDENCE ADDRESS:
ADDRESSEE: Spensley Horn Jubas & Lubitz
STREET: 1880 Century Park East, Suite 500
CITY: Los Angeles
STATE: California
COUNTRY: US
ZIP: 90067
COMPUTER READABLE FORM:
MEDIUM TYPE: floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US94/00685
FILING DATE: 12-JAN-1994
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Wetherell, Jr. Ph.D., John R.
REGISTRATION NUMBER: 31,678
REFERENCE/DOCKET NUMBER: PD3288
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 455-5100
TELEFAX: (619) 455-5110
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
LENGTH: 118 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
IMMEDIATE SOURCE:
CLONE: OP-1
FEATURE:
NAME/KEY: Protein
LOCATION: 1..118
PCT-US94-00685-10

Query Match      100.0%; Score 111; DB 5; Length 118;
Best Local Similarity 100.0%; Pred. No. 6.3e-08;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
DB 73 INPETHKPCCAPTOLNAIS 92
```

```
RESULT 28
US-08-581-529B-12
Sequence 12, Application US/08581529B
Patent No. 5770444
GENERAL INFORMATION:
APPLICANT: Lee, Se-jin
APPLICANT: Huynh, Thanh
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-6
NUMBER OF SEQUENCES: 21
CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson
STREET: 4225 Executive Square, Suite 1400
CITY: La Jolla
STATE: California
COUNTRY: USA
ZIP: 92037
COMPUTER READABLE FORM:
MEDIUM TYPE: floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/581,529B
FILING DATE: 15-APR-1996
CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: Lisa A. Hallie, Ph.D.
REGISTRATION NUMBER: 38,347
REFERENCE/DOCKET NUMBER: 07265/082001
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 678-5070
TELEFAX: (619) 678-5099
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
IMMEDIATE SOURCE:
CLONE: OP-1
FEATURE:
NAME/KEY: Protein
LOCATION: 1..119
US-08-581-529B-12

Query Match      100.0%; Score 111; DB 1; Length 119;
Best Local Similarity 100.0%; Pred. No. 6.4e-08;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
DB 74 INPETHKPCCAPTOLNAIS 93

RESULT 29
US-08-455-559-18
Sequence 18, Application US/08455559
Patent No. 5801014
GENERAL INFORMATION:
APPLICANT: Lee, Se-jin
APPLICANT: Huynh, Thanh
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-5
NUMBER OF SEQUENCES: 27
CORRESPONDENCE ADDRESS:
ADDRESSEE: SPENSLEY HORN JUBAS & LUBITZ
STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR
CITY: LOS ANGELES
STATE: CALIFORNIA
COUNTRY: US
ZIP: 90067
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COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/455,559  
FILING DATE: 31-MAY-1995  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/003,144  
FILING DATE: 12-JAN-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: WETHERELL, JR. PH.D., JOHN R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: PD2280  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 619/455-5100  
TELEFAX: 619-455-5110  
INFORMATION FOR SEQ ID NO: 18:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
US-08-455-559-18

Query Match 100.0%; Score 111; DB 1; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6.4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQLNIAIS 20  
DB 74 INPETYKPCCAPTQLNIAIS 93

RESULT 30  
US-08-525-596B-22  
Sequence 22, Application US/08525596B  
Patent No. 5827733  
GENERAL INFORMATION:  
APPLICANT: Huynh, Thanh  
APPLICANT: Lee, Se-Jin  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-8  
NUMBER OF SEQUENCES: 32  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Fish & Richardson P.C.  
STREET: 4225 Executive Square, Suite 1400  
CITY: La Jolla  
STATE: CA  
COUNTRY: USA  
ZIP: 92037  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
OPERATING SYSTEM: Windows95  
SOFTWARE: FastSeq for Windows Version 2.0  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/525,596B  
FILING DATE: 19-SEP-1995  
CLASSIFICATION: 514  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: PCT/US94/07762  
FILING DATE: 08-JUL-1994  
ATTORNEY/AGENT INFORMATION:  
NAME: Wetherell, Jr., Ph.D. John R.  
REGISTRATION NUMBER: 31,678

REFERENCE/DOCKET NUMBER: 07265/075001  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 619-678-5070  
TELEFAX: 619-678-5099  
INFORMATION FOR SEQ ID NO: 22:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
US-08-525-596B-22

Query Match 100.0%; Score 111; DB 2; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6.4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQLNIAIS 20  
DB 74 INPETYKPCCAPTQLNIAIS 93

RESULT 31  
US-08-581-528A-12  
Sequence 12, Application US/08581528A  
Patent No. 5986058  
GENERAL INFORMATION:  
APPLICANT: Lee, Se-Jin  
APPLICANT: Huynh, Thanh  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-7  
NUMBER OF SEQUENCES: 21  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Fish & Richardson, P.C.  
STREET: 4225 Executive Square, Suite 1400  
CITY: La Jolla  
STATE: CA  
COUNTRY: USA  
ZIP: 92037  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/581,528A  
FILING DATE: 03-SEP-1993  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/089,670  
FILING DATE: 09-JUL-1993  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: Lisa A. Hallie, Ph.D.  
REGISTRATION NUMBER: 38,347  
REFERENCE/DOCKET NUMBER: 07265/081001  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 619/678-5070  
TELEFAX: 619/678-5099  
INFORMATION FOR SEQ ID NO: 12:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein

LOCATION: 1..119  
US-08-581-528A-12  
Query Match 100.0%; Score 111; DB 2; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6.4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
|||||  
DB 74 INPETHKPCCAPTOLNAIS 93

RESULT 32  
US-09-097-616-12  
Sequence 12, Application US/09097616  
Patent No. 6090563  
GENERAL INFORMATION:  
APPLICANT: Lee, Se-Jin  
APPLICANT: Huynh, Thanh  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-6  
NUMBER OF SEQUENCES: 21  
CORRESPONDENCE ADDRESSES:  
ADDRESSES: Fish & Richardson  
STREET: 4225 Executive Square, Suite 1400  
CITY: La Jolla  
STATE: California  
COUNTRY: USA  
ZIP: 92037  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/097,616  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/581,529  
FILING DATE: 15-APR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Lisa A. Halle, Ph.D.  
REGISTRATION NUMBER: 38,347  
REFERENCE/DOCKET NUMBER: 07265/082001  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 678-5070  
TELEFAX: (619) 678-5099  
INFORMATION FOR SEQ ID NO: 12:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
US-09-097-616-12  
Query Match 100.0%; Score 111; DB 3; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6.4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
|||||  
DB 74 INPETHKPCCAPTOLNAIS 93

RESULT 33  
US-09-177-860A-22  
Sequence 22, Application US/09177860A

Patent No. 6096506  
GENERAL INFORMATION:  
APPLICANT: Huynh, Thanh  
APPLICANT: Lee, Se-Jin  
TITLE OF INVENTION: ANTIBODIES SPECIFIC FOR GROWTH DIFFERENTIATION FACTOR-8 AN  
NUMBER OF SEQUENCES: 32  
CORRESPONDENCE ADDRESSES:  
ADDRESSES: Gray Cary Ware & Freidenrich LLP  
STREET: 4365 Executive Drive, Suite 1600  
CITY: San Diego  
STATE: CA  
COUNTRY: US  
ZIP: 92121  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: Windows95  
SOFTWARE: FASTSEQ for Windows Version 2.0  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/177,860A  
FILING DATE: 23-OCT-1998  
CLASSIFICATION: 424  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/525,596  
FILING DATE: 19-SEP-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: Halle, Ph.D., Lisa A.  
REGISTRATION NUMBER: 38,347  
REFERENCE/DOCKET NUMBER: 07265/075003  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 858-677-1456  
TELEFAX: 858-677-1465  
INFORMATION FOR SEQ ID NO: 22:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
US-09-177-860A-22

Query Match 100.0%; Score 111; DB 3; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6.4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
|||||  
DB 74 INPETHKPCCAPTOLNAIS 93

RESULT 34  
US-08-624-635-13  
Sequence 13, Application US/08624635  
Patent No. 6204047  
GENERAL INFORMATION:  
APPLICANT: Lee, Se-Jin  
APPLICANT: Cunningham, No. 6204047een  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-10  
NUMBER OF SEQUENCES: 26  
CORRESPONDENCE ADDRESSES:  
ADDRESSES: Spensley Horn Jubas & Lubitz  
STREET: 1880 Century Park East, Suite 500  
CITY: Los Angeles  
STATE: California  
COUNTRY: USA  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/624,635  
FILING DATE: 16-AUG-1996  
CLASSIFICATION: 536  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/134,078  
FILING DATE: 08-OCT-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: Wetherell, Jr., Ph.D., John R.,  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: PD-3054  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
US-08-624-635-13

Query Match 100.0%; Score 111; DB 3; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6.4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQNLNIS 20  
Db 74 INPETYKPCCAPTQNLNIS 93

RESULT 35  
US-09-145-060-18  
Sequence 18, Application US/09145060  
Patent No. 6245896  
GENERAL INFORMATION:  
APPLICANT: Lee, Se-Uin  
APPLICANT: Huynh, Thanh  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-5  
NUMBER OF SEQUENCES: 27  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Fish & Richardson, P.C.  
STREET: 4225 Executive Square, Suite 1400  
CITY: La Jolla  
STATE: CA  
COUNTRY: USA  
ZIP: 92037  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: Windows95  
SOFTWARE: FastSeq for Windows Version 2.0  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/145,060  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/455,559  
FILING DATE: 31-MAY-1995  
APPLICATION NUMBER: 08/003,144  
FILING DATE: 12-JAN-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: Lisa A. Halle, Ph.D.  
REGISTRATION NUMBER: 38,347  
REFERENCE/DOCKET NUMBER: 07265/057001  
TELECOMMUNICATION INFORMATION:

TELEPHONE: 619/678-5070  
TELEFAX: 619/678-5099  
INFORMATION FOR SEQ ID NO: 18:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
US-09-145-060-18

Query Match 100.0%; Score 111; DB 3; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6.4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQNLNIS 20  
Db 74 INPETYKPCCAPTQNLNIS 93

RESULT 36  
US-09-378-238-26  
Sequence 26, Application US/09378238  
Patent No. 6465238  
GENERAL INFORMATION:  
APPLICANT: Lee, Se-Uin  
APPLICANT: McPherson, Alexandra C.  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-8 NUCLEIC  
TITLE OF INVENTION: ACID AND POLYPEPTIDES FROM AQUATIC SPECIES AND NON-HUMAN  
FILE REFERENCE: JHU1120-9  
CURRENT APPLICATION NUMBER: US/09/378,238  
CURRENT FILING DATE: 1999-08-19  
EARLIER APPLICATION NUMBER: 08/795,071  
EARLIER FILING DATE: 1997-02-05  
EARLIER APPLICATION NUMBER: 08/525,596  
EARLIER FILING DATE: 1995-10-25  
EARLIER APPLICATION NUMBER: PCT/US94/03019  
EARLIER FILING DATE: 1994-03-18  
EARLIER APPLICATION NUMBER: 08/033,923  
EARLIER FILING DATE: 1993-03-15  
NUMBER OF SEQ ID NOS: 41  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 26  
LENGTH: 119  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: OP-1  
US-09-378-238-26

Query Match 100.0%; Score 111; DB 4; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6.4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQNLNIS 20  
Db 74 INPETYKPCCAPTQNLNIS 93

RESULT 37  
US-09-629-938-22  
Sequence 22, Application US/09629938  
Patent No. 6500664  
GENERAL INFORMATION:  
APPLICANT: Huynh, Thanh  
APPLICANT: Lee, Se-Uin  
TITLE OF INVENTION: ANTIBODIES SPECIFIC FOR GROWTH DIFFERENTIATION  
FACTOR-8 AND METHODS OF USING SAME (amended)  
NUMBER OF SEQUENCES: 32  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Gray Cary Ware & Freidenrich LLP

```
STREET: 4365 Executive Drive, Suite 1600
CITY: San Diego
STATE: CA
COUNTRY: US
ZIP: 92121
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: Windows95
SOFTWARE: FastSeq for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/629,938
FILING DATE: 01-Aug-2000
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/177,860
FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: Haile, Ph.D., Lisa A.
REGISTRATION NUMBER: 38,347
REFERENCE/DOCKET NUMBER: 07265/075003
TELECOMMUNICATION INFORMATION:
TELEPHONE: 858-677-1456
TELEFAX: 858-677-1465
INFORMATION FOR SEQ ID NO: 22:
SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acids
TYPE: amino acid
TOPOLOGY: Linear
MOLECULE TYPE: Protein
IMMEDIATE SOURCE:
CLONE: OP-1
FEATURE:
NAME/KEY: Protein
LOCATION: 1..119
SEQUENCE DESCRIPTION: SEQ ID NO: 22:
US-09-629-938-22

Query Match      100.0%; Score 111; DB 4; Length 119;
Best Local Similarity 100.0%; Pred. No. 6,4e-08;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNIS 20
Db 74 INPETHKPCCAPTQNLNIS 93

RESULT 38
US-09-686-344-40
Sequence 40, Application US/09686344
Patent No. 6607884
GENERAL INFORMATION:
APPLICANT: Lee, Se-Jin
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-8
FILE REFERENCE: 07265/144001
CURRENT APPLICATION NUMBER: US/09/686,344
CURRENT FILING DATE: 2000-10-10
PRIOR APPLICATION NUMBER: 08/662,445
PRIOR FILING DATE: 1997-05-23
PRIOR APPLICATION NUMBER: 08/847,910
PRIOR FILING DATE: 1997-04-28
PRIOR APPLICATION NUMBER: 08/795,071
PRIOR FILING DATE: 1997-02-05
PRIOR APPLICATION NUMBER: 08/525,596
PRIOR FILING DATE: 1995-10-26
PRIOR APPLICATION NUMBER: PCT/US94/03019
PRIOR FILING DATE: 1994-03-18
PRIOR APPLICATION NUMBER: 08/033,923
PRIOR FILING DATE: 1993-03-19
NUMBER OF SEQ ID NOS: 51
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 40
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LENGTH: 119
TYPE: PRT
ORGANISM: Homo sapiens
US-09-686-344-40

Query Match      100.0%; Score 111; DB 4; Length 119;
Best Local Similarity 100.0%; Pred. No. 6,4e-08;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNIS 20
Db 74 INPETHKPCCAPTQNLNIS 93

RESULT 39
US-09-412-791D-12
Sequence 12, Application US/09412791D
Patent No. 6680372
GENERAL INFORMATION:
APPLICANT: THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE
APPLICANT: LEE, Se-Jin
APPLICANT: HUYNH, Thanh
TITLE OF INVENTION: ANTIBODIES BINDING TO GROWTH DIFFERENTIATION FACTOR-7
FILE REFERENCE: JHU1130-2
CURRENT APPLICATION NUMBER: US/09/412,791D
CURRENT FILING DATE: 1999-10-05
PRIOR APPLICATION NUMBER: US 08/581,528
PRIOR FILING DATE: 1996-01-09
PRIOR APPLICATION NUMBER: PCT/US94/07799
PRIOR FILING DATE: 1994-07-08
NUMBER OF SEQ ID NOS: 21
SOFTWARE: PatentIn version 3.0
SEQ ID NO 12
LENGTH: 119
TYPE: PRT
ORGANISM: Homo sapiens
US-09-412-791D-12

Query Match      100.0%; Score 111; DB 4; Length 119;
Best Local Similarity 100.0%; Pred. No. 6,4e-08;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNIS 20
Db 74 INPETHKPCCAPTQNLNIS 93

RESULT 40
US-09-619-061-12
Sequence 12, Application US/09619061
Patent No. 6713302
GENERAL INFORMATION:
APPLICANT: Lee, Se-Jin
APPLICANT: HUYNH, Thanh
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-6
NUMBER OF SEQUENCES: 21
CORRESPONDENCE ADDRESS:
ADDRESSER: Fish & Richardson
STREET: 4225 Executive Square, Suite 1400
CITY: La Jolla
STATE: California
COUNTRY: USA
ZIP: 92037
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/619,061
FILING DATE: 18-Jul-2000
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
```

APPLICATION NUMBER: US/09/097,616  
FILING DATE: 15-JUN-1998  
APPLICATION NUMBER: US 08/581,529  
FILING DATE: 15-APR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Lisa A. Haller, Ph.D.  
REGISTRATION NUMBER: 38,347  
REFERENCE/DOCKET NUMBER: 07265/082001  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 678-5070  
TELEFAX: (619) 678-5099  
INFORMATION FOR SEQ ID NO: 12:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
SEQUENCE DESCRIPTION: SEQ ID NO: 12:  
US-09-619-061-12

Query Match 100.0%; Score 111; DB 4; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6,4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 74 INPETHKPCCAPTOLNAIS 93

RESULT 41  
PCT-US94-00657-18  
Sequence 18, Application PC/TUS9400657  
GENERAL INFORMATION:  
APPLICANT: SE-JIN LEE  
APPLICANT: HUYNH, THANH  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-5  
NUMBER OF SEQUENCES: 27  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: SPENSLEY HORN TUBAS & LUBITZ  
STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR  
CITY: LOS ANGELES  
STATE: CALIFORNIA  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US94/00657  
FILING DATE: 1/12/94  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: WETHERILL, JR. PH.D., JOHN R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: FD3256 CIP OF PD2280  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 619/455-5100  
TELEFAX: 619-455-5110  
INFORMATION FOR SEQ ID NO: 18:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein

IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
PCT-US94-00657-18

Query Match 100.0%; Score 111; DB 5; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6,4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 74 INPETHKPCCAPTOLNAIS 93

RESULT 42  
PCT-US94-07762-12  
Sequence 12, Application PC/TUS9407762  
GENERAL INFORMATION:  
APPLICANT: THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-6  
NUMBER OF SEQUENCES: 21  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Spensley Horn Tubas & Lubitz  
STREET: 1880 Century Park East, Suite 500  
CITY: Los Angeles  
STATE: California  
COUNTRY: USA  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US94/07762  
FILING DATE: 08-JUL-1994  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: TUMARKIN, LISA A., PH.D.  
REGISTRATION NUMBER: P-38,347  
REFERENCE/DOCKET NUMBER: FD3349  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 12:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
PCT-US94-07762-12

Query Match 100.0%; Score 111; DB 5; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6,4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 74 INPETHKPCCAPTOLNAIS 93

RESULT 43  
PCT-US94-07799-12  
Sequence 12, Application PC/TUS9407799  
GENERAL INFORMATION:

APPLICANT: THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-7  
NUMBER OF SEQUENCES: 21  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Spensley Horn Jubas & Lubitz  
STREET: 1880 Century Park East, Suite 500  
CITY: Los Angeles  
STATE: California  
COUNTRY: USA  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US94/07799  
FILING DATE: 08-JUL-1994  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: TUVARKIN, LISA A., PH.D.  
REGISTRATION NUMBER: P-38,347  
REFERENCE/DOCKET NUMBER: PD-2348  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 12:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
PCT-US94-07799-12

Query Match 100.0%; Score 111; DB 5; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6.4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 74 INPETHKPCCAPTOLNAIS 93

RESULT 44  
US-07-718-274A-2  
Sequence 2, Application US/07718274A  
Patent No. 5284756  
GENERAL INFORMATION:  
APPLICANT: Grinna, Lynn  
APPLICANT: Parsons, Thomas F.  
APPLICANT: Theofan, Georgia  
TITLE OF INVENTION: Osteogenic Factor  
NUMBER OF SEQUENCES: 63  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray &  
ADDRESSEE: Bicknell  
STREET: Two First National Plaza, 20 South Clark  
STREET: Street  
CITY: Chicago  
STATE: Illinois  
COUNTRY: USA  
ZIP: 60603  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/718,274A  
FILING DATE: 19910620  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/415,555  
FILING DATE: 04-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/256,034  
FILING DATE: 11-OCT-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Sharp, Jeffrey S.  
REGISTRATION NUMBER: 31,879  
REFERENCE/DOCKET NUMBER: 27129/9430  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (312) 984-9740  
TELEFAX: (312) 984-9740  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-07-718-274A-2

Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 94 INPETHKPCCAPTOLNAIS 113

RESULT 45  
US-08-163-877-10  
Sequence 10, Application US/08163877  
Patent No. 5399677  
GENERAL INFORMATION:  
APPLICANT: McCoy, John  
APPLICANT: Murray, Beth  
APPLICANT: Wolfman, Neil  
TITLE OF INVENTION: MUTANTS OF BONE MORPHOGENIC PROTEINS  
NUMBER OF SEQUENCES: 10  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Genetics Institute, Inc - Legal Affairs  
STREET: 87 Cambridgepark Drive  
CITY: Cambridge  
STATE: Massachusetts  
COUNTRY: USA  
ZIP: 02140  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/163,877  
FILING DATE:  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: Lazar, Steven R.  
REGISTRATION NUMBER: 32,618  
REFERENCE/DOCKET NUMBER: GI 5219  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617 876-1170 x 8260  
TELEFAX: 617 876-5851  
INFORMATION FOR SEQ ID NO: 10:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
TOPOLOGY: linear



MOLECULE TYPE: protein  
US-08-163-877-10

Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQNLNLS 20  
|||||  
DB 94 INPETHKPCAPQNLNLS 113

RESULT 46  
Sequence 2, Application US/08149106  
Patent No. 5411941  
GENERAL INFORMATION:  
APPLICANT: Grinna, Lynn  
APPLICANT: Parsons, Thomas F.  
APPLICANT: Theofan, Georgia  
TITLE OF INVENTION: Osteogenic Factor  
NUMBER OF SEQUENCES: 63  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray &  
ADDRESSEE: Bicknell  
STREET: Two First National Plaza, 20 South Clark  
STREET: Street  
CITY: Chicago  
STATE: Illinois  
COUNTRY: USA  
ZIP: 60603  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/149,106  
FILING DATE:  
CLASSIFICATION: 514  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/415,555  
FILING DATE: 04-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/256,034  
FILING DATE: 11-OCT-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Sharp, Jeffrey S.  
REGISTRATION NUMBER: 31,879  
REFERENCE/DOCKET NUMBER: 27129/9430  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (312) 346-5750  
TELEFAX: (312) 346-5750  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-149-106-2

Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQNLNLS 20  
|||||  
DB 94 INPETHKPCAPQNLNLS 113

RESULT 47  
US-08-298-021-2

Sequence 2, Application US/08298021  
Patent No. 5508263  
GENERAL INFORMATION:  
APPLICANT: Grinna, Lynn  
APPLICANT: Parsons, Thomas F.  
APPLICANT: Theofan, Georgia  
TITLE OF INVENTION: Heterodimeric Osteogenic Factor  
NUMBER OF SEQUENCES: 63  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-64023  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/298,021  
FILING DATE:  
CLASSIFICATION: 514  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/149,106  
FILING DATE: 11-OCT-1993  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/718,274  
FILING DATE: 20-JUN-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/415,555  
FILING DATE: 04-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/256,034  
FILING DATE: 11-OCT-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Sharp, Jeffrey S.  
REGISTRATION NUMBER: 31,879  
REFERENCE/DOCKET NUMBER: 27129/32196  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-298-021-2

Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQNLNLS 20  
|||||  
DB 94 INPETHKPCAPQNLNLS 113

RESULT 48  
US-08-278-729A-5  
Sequence 5, Application US/08278729A  
Patent No. 5650276  
GENERAL INFORMATION:  
APPLICANT: SMART, JOHN  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H. L.  
APPLICANT: COHEN, CHARLES M.

TITLE OF INVENTION: MORPHOGENIC PROTEIN SCREENING METHOD  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/278,729A  
FILING DATE: 20-JUN-1994  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER Esq., EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-058CPFW  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-278-729A-5  
Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Qy 1 INPETHKPCCAPTQNLNLS 20  
Db 94 INPETHKPCCAPTQNLNLS 113  
RESULT 49  
US-08-155-343A-5  
Sequence 5, Application US/08155343A  
Patent No. 5655593  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: MORPHOGENIC-INDUCED PERIODONTAL TISSUE  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/155,343A  
FILING DATE: 15-NOV-1993  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-067FW  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-155-343A-5  
Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Qy 1 INPETHKPCCAPTQNLNLS 20  
Db 94 INPETHKPCCAPTQNLNLS 113  
RESULT 50  
US-08-406-672-5  
Sequence 5, Application US/08406672  
Patent No. 5674494  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OKAYNAK, ENGIN  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR  
INCREASE BONE MASS IN METABOLIC BONE DISEASES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/406,672  
FILING DATE: 20-MAR-1995  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 752,857  
FILING DATE: 30-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 667,274  
FILING DATE: 11-MAR-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-060CN  
TELECOMMUNICATION INFORMATION:

TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-406-672-5

Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTOLNAIS 20  
Db 94 INPETYKPCCAPTOLNAIS 113

RESULT 51  
US-08-643-563A-5  
Sequence 5, Application US/08643563A  
Patent No. 5707810  
GENERAL INFORMATION:  
APPLICANT: SMART, JOHN  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGENIC PROTEIN SCREENING METHOD  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/643,563A  
FILING DATE: 06-MAY-1996  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: TWOMEY Esq., MICHAEL J.  
REGISTRATION NUMBER: 36,349  
REFERENCE/DOCKET NUMBER: CRP-058CN2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-643-563A-5

Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTOLNAIS 20  
Db 94 INPETYKPCCAPTOLNAIS 113

RESULT 52  
US-08-643-763A-5  
Sequence 5, Application US/08643763A  
Patent No. 5733878  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: MORPHOGENIC-INDUCED PERIODONTAL TISSUE  
REGENERATION.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/643,763A  
FILING DATE: 06-MAY-1996  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-067CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-643-763A-5

Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTOLNAIS 20  
Db 94 INPETYKPCCAPTOLNAIS 113

RESULT 53  
US-08-462-623-5  
Sequence 5, Application US/08462623  
Patent No. 5739107  
GENERAL INFORMATION:

APPLICANT: COHEN, CHARLES M.  
APPLICANT: CHARETTE, MARC F.  
APPLICANT: KUBERASAMPATH, THIANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT OF GASTROINTESTINAL  
TITLE OF INVENTION: ULCERS.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: FLOPPY disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/462,623  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/445,882  
FILING DATE: 22-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-074CN  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-462-623-5  
Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Oy 1 INPETHPKCCAPTQNLNLS 20  
Db 94 INPETHPKCCAPTQNLNLS 113  
RESULT 54  
US-08-451-953A-5  
Sequence 5, Application US/08451953A  
Patent No. 5741641  
GENERAL INFORMATION:  
APPLICANT: SMART, JOHN  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THIANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGENIC PROTEIN SCREENING METHOD  
NUMBER OF SEQUENCES: 33

CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: FLOPPY disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/451,953A  
FILING DATE: 26-MAY-1995  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER Esq., EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-058CN  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-451-953A-5  
Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Oy 1 INPETHPKCCAPTQNLNLS 20  
Db 94 INPETHPKCCAPTQNLNLS 113  
RESULT 55  
US-08-360-914B-10  
Sequence 10, Application US/08360914B  
Patent No. 5756308  
GENERAL INFORMATION:  
APPLICANT: NEILL M. WOLFMAN and John McCoy  
TITLE OF INVENTION: MUTANTS OF BONE MORPHOGENIC PROTEINS  
NUMBER OF SEQUENCES: 15  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Genetics Institute, Inc - Legal Affairs  
STREET: 87 Cambridgepark Drive  
CITY: Cambridge  
STATE: Massachusetts  
COUNTRY: USA  
ZIP: 02140  
COMPUTER READABLE FORM:  
MEDIUM TYPE: FLOPPY disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/360,914B  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/163,877  
FILING DATE: December 7, 1993  
ATTORNEY/AGENT INFORMATION:

NAME: Lazar, Steven R.  
REGISTRATION NUMBER: 32,618  
REFERENCE/DOCKET NUMBER: GI 5219B  
TELEPHONE: 617 498-8260  
TELEFAX: 617 876-5851  
INFORMATION FOR SEQ ID NO: 10:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-741-589A-10

Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPTOLNIS 20  
DB 94 INPETHKPCAPTOLNIS 113

RESULT 56  
US-08-741-589A-10  
Sequence 10, Application US/08741589A  
Patent No. 5804416  
GENERAL INFORMATION:  
APPLICANT: Neil M. WOLFMAN and John MCCOY  
TITLE OF INVENTION: MUTANTS OF BONE MORPHOGENIC PROTEINS  
NUMBER OF SEQUENCES: 13  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Genetics Institute, Inc - Legal Affairs  
STREET: 87 Cambridgepark Drive  
CITY: Cambridge  
STATE: Massachusetts  
COUNTRY: USA  
ZIP: 02140  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/741,589A  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/163,877  
FILING DATE: December 7, 1993  
ATTORNEY/AGENT INFORMATION:  
NAME: Lazar, Steven R.  
REGISTRATION NUMBER: 32,618  
REFERENCE/DOCKET NUMBER: GI 5219B-DIV  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617 498-8260  
TELEFAX: 617 876-5851  
INFORMATION FOR SEQ ID NO: 10:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-741-589A-10

Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPTOLNIS 20  
DB 94 INPETHKPCAPTOLNIS 113

RESULT 57  
US-08-445-468A-5  
Sequence 5, Application US/08445468A  
Patent No. 5849686  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: PANG, ROY H. L.  
TITLE OF INVENTION: MORPHOGEN-INDUCED LIVER REGENERATION  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/445,468A  
FILING DATE: 22-MAY-1995  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON ESQ., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-072FW2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1,139  
OTHER INFORMATION: /note="HOP-1 (MATURE FORM)"  
US-08-445-468A-5

Query Match 100.0%; Score 111; DB 2; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPTOLNIS 20  
DB 94 INPETHKPCAPTOLNIS 113

RESULT 58  
US-08-461-397A-5  
Sequence 5, Application US/08461397A  
Patent No. 5972884  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: CHARETTE, MARC F.  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: PANG, ROY H. L.  
TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING  
PROLIFERATION OF EPITHELIAL CELLS.

NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/461,397A  
FILING DATE: 05-JUN-1995  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ., EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-074FW2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7100  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-461-397A-5  
Query Match 100.0%; Score 111; DB 2; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHPCPCAPTQLNALIS 20  
DB 94 INPETHPCPCAPTQLNALIS 113  
RESULT 59  
US-08-912-088-5  
Sequence 5, Application US/08912088  
Patent No. 5894131  
GENERAL INFORMATION:  
APPLICANT: SMART, JOHN  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OZKANAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGENIC PROTEIN SCREENING METHOD  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/912,088  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/278,729  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ., EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-058CPFW  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-912-088-5  
Query Match 100.0%; Score 111; DB 2; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHPCPCAPTQLNALIS 20  
DB 94 INPETHPCPCAPTQLNALIS 113  
RESULT 60  
US-08-278-730A-5  
Sequence 5, Application US/08278730A  
Patent No. 6022853  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: MORPHOGENIC-ENRICHED DIETARY COMPOSITION  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/278,730A  
FILING DATE: 20-JULY-1994  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: PENTON ESQ., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-071FW  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids

TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-278-730A-5

Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNIAIS 20  
Db 94 INPETHKPCCAPTQLNIAIS 113

## RESULT 61

US-08-445-467-5  
Sequence 5, Application US/08445467  
Patent No. 6077823  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: PANG, ROY HL  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: RUEGER, DAVID C  
APPLICANT: COHEN, CHARLES M  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: SMART, JOHN E  
TITLE OF INVENTION: MORPHOGEN-INDUCED MODULATION OF  
TITLE OF INVENTION: INFLAMMATORY RESPONSE  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC.  
STREET: 35 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/445,467  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/165,511  
FILING DATE:  
APPLICATION NUMBER: US/07/938,336  
FILING DATE:  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/753,059  
FILING DATE: 30-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-059CP.APP  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids

TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
ORIGINAL SOURCE:  
ORGANISM: Homo sapiens  
TISSUE TYPE: HIPPOCAMPUS  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /label= hop1-MATURE  
US-08-445-467-5

Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNIAIS 20  
Db 94 INPETHKPCCAPTQLNIAIS 113

## RESULT 62

US-08-443-676-1  
Sequence 1, Application US/08443676  
Patent No. 6077968  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, Thangavel  
APPLICANT: BERLOWITZ-TARRANT, Lawrence  
TITLE OF INVENTION: SYNTHETIC BONE MATRIX  
NUMBER OF SEQUENCES: 1  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Patent Administrator, Testa, Hurwitz &  
STREET: Thibault, LLP  
CITY: Boston  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/443,676  
FILING DATE: 18-MAY-1995  
CLASSIFICATION: 623  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY, Robin D  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: STK-049DV  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 1:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS:  
TOPOLOGY: linear  
MOLECULE TYPE: peptide  
US-08-443-676-1

Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNIAIS 20  
Db 94 INPETHKPCCAPTQLNIAIS 113

RESULT 63  
US-08-480-515A-5  
; Sequence 5, Application US/08480515A  
; Patent No. 6090776  
; GENERAL INFORMATION:  
; APPLICANT: KUBERASAMPATH, THANGAVEL  
; APPLICANT: PANG, ROY H.T.  
; APPLICANT: OPPERMAN, HERMANN  
; APPLICANT: RUEGER, DAVID C.  
; APPLICANT: COHEN, CHARLES M.  
; APPLICANT: SMART, JOHN E.  
; TITLE OF INVENTION: MORPHOGEN TREATMENT OF ORGAN TRANSPLANTS  
; NUMBER OF SEQUENCES: 3  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
; STREET: 45 SOUTH STREET  
; CITY: HOPKINTON  
; STATE: MA  
; COUNTRY: USA  
; ZIP: 01748  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/480,515A  
; FILING DATE: 07-JUN-1995  
; CLASSIFICATION: 435  
; ATTORNEY/AGENT INFORMATION:  
; NAME: FENTON Esq., GILLIAN M.  
; REGISTRATION NUMBER: 36,508  
; REFERENCE/DOCKET NUMBER: CRP-068FWC  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (617) 248-7560  
; TELEFAX: (617) 248-7100  
; INFORMATION FOR SEQ ID NO: 5:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 139 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FEATURE:  
; NAME/KEY: Protein  
; LOCATION: 1..139  
; OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-480-515A-5  
Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Qy 1 INPETHKPCCAPTQNLNALS 20  
Db 94 INPETHKPCCAPTQNLNALS 113  
RESULT 64  
US-08-414-033A-5  
; Sequence 5, Application US/08414033A  
; Patent No. 6194376  
; GENERAL INFORMATION:  
; APPLICANT: KUBERASAMPATH, THANGAVEL  
; APPLICANT: PANG, ROY H.T.  
; APPLICANT: OPPERMAN, HERMANN  
; APPLICANT: RUEGER, DAVID C.  
; APPLICANT: COHEN, CHARLES M.  
; TITLE OF INVENTION: METHOD FOR MODULATING INFLAMMATORY  
; NUMBER OF SEQUENCES: 21  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Testa, Hurwitz & Thibault

STREET: 125 High St.  
; CITY: Boston  
; STATE: MA  
; COUNTRY: USA  
; ZIP: 02110  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/414,033A  
; FILING DATE: 30-MAR-1995  
; CLASSIFICATION: 514  
; ATTORNEY/AGENT INFORMATION:  
; NAME: FENTON Esq., GILLIAN M.  
; REGISTRATION NUMBER: 36,508  
; REFERENCE/DOCKET NUMBER: CRP-059FW  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (617) 248-7560  
; TELEFAX: (617) 248-7100  
; INFORMATION FOR SEQ ID NO: 5:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 139 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FEATURE:  
; NAME/KEY: Protein  
; LOCATION: 1..139  
; OTHER INFORMATION: /note= "HOP-1 (mature form)"  
US-08-414-033A-5  
Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Qy 1 INPETHKPCCAPTQNLNALS 20  
Db 94 INPETHKPCCAPTQNLNALS 113  
RESULT 65  
US-08-271-556A-3  
; Sequence 3, Application US/08271556A  
; Patent No. 6211146  
; GENERAL INFORMATION:  
; APPLICANT: KUBERASAMPATH, THANGAVEL  
; APPLICANT: PANG, ROY H.T.  
; APPLICANT: OPPERMAN, HERMANN  
; APPLICANT: RUEGER, DAVID  
; APPLICANT: COHEN, CHARLES M.  
; TITLE OF INVENTION: 60A PROTEIN-INDUCED MORPHOGENESIS  
; NUMBER OF SEQUENCES: 16  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: CREATIVE BIOMOLECULES, INC  
; STREET: 45 SOUTH STREET  
; CITY: HOPKINTON  
; STATE: MA  
; COUNTRY: USA  
; ZIP: 01748  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/271,556A  
; FILING DATE: 07-JUL-1994  
; CLASSIFICATION: 435  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/945,292



FILING DATE: 15-SEP-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/753,059  
FILING DATE: 30-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/752,857  
FILING DATE: 30-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/923,780  
FILING DATE: 31-JUL-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/922,813  
FILING DATE: 31-JUL-1992  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON, GILLIAN M  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-066FM  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 3:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
ORIGINAL SOURCE:  
ORGANISM: Homo sapiens  
TISSUE TYPE: HIPPOCAMPUS  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /label= hop1-MATURE  
US-08-271-556A-3

Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCAPTQLNIAIS 20  
Db 94 INPETHPKPCAPTQLNIAIS 113

RESULT 66  
US-08-440-894A-5  
Sequence 5, Application US/08440894A  
Patent No. 6288031  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: SMART, JOHN E  
APPLICANT: PANG, ROY H L  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: RUEGER, DAVID C  
APPLICANT: COHEN, CHARLES M  
TITLE OF INVENTION: METHOD FOR MODULATING INFLAMMATORY  
TITLE OF INVENTION: RESPONSE  
NUMBER OF SEQUENCES: 21  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/440,894A  
FILING DATE: 15-MAY-1995  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP059CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /label= HOP1-MATURE  
US-08-440-894A-5

Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCAPTQLNIAIS 20  
Db 94 INPETHPKPCAPTQLNIAIS 113

RESULT 67  
US-09-170-936-5  
Sequence 5, Application US/09170936  
Patent No. 6333312  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: COHEN, CHARLES M  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: RUEGER, DAVID C  
APPLICANT: PANG, ROY H L  
APPLICANT: SMART, JOHN E  
TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR  
TITLE OF INVENTION: INCREASE BONE MASS IN METABOLIC BONE DISEASES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/170,936  
FILING DATE:  
CLASSIFICATION: 514  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/432,883  
FILING DATE: 2-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Bsq., GILLIAN M.

REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-060CPFWC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-09-170-936-5

Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 94 INPETHKPCCAPTOLNAIS 113

RESULT 68  
US-08-868-452-46  
Sequence 46, Application US/08868452C  
Patent No. 6352872  
GENERAL INFORMATION:  
APPLICANT: Marcel E. Nimmi  
APPLICANT: Frederick L. Hall  
APPLICANT: Lingtao Wu  
APPLICANT: Bo Han  
APPLICANT: Edwin Shore  
TITLE OF INVENTION: BONE MORPHOGENETIC PROTEINS AND THEIR  
TITLE OF INVENTION: USE IN BONE GROWTH  
FILE REFERENCE: 17972-11  
CURRENT APPLICATION NUMBER: US/08/868,452C  
CURRENT FILING DATE: 1997-06-03  
NUMBER OF SEQ ID NOS: 51  
SOFTWARE: FastSeq for Windows Version 3.0  
SEQ ID NO 46  
LENGTH: 139  
TYPE: PRT  
ORGANISM: Human  
US-08-868-452-46

Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 94 INPETHKPCCAPTOLNAIS 113

RESULT 69  
US-08-461-113-5  
Sequence 5, Application US/08461113  
Patent No. 6399569  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: CHARBET, MARC F.  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: OKAYNAK, ENGIN  
APPLICANT: SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMBITING

TITLE OF INVENTION: PROLIFERATION OF EPITHELIAL CELLS.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/461,113  
FILING DATE:  
CLASSIFICATION: 514  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/445,882  
FILING DATE: 22-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-074DV  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-461-113-5

Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 94 INPETHKPCCAPTOLNAIS 113

RESULT 70  
US-08-456-033-5  
Sequence 5, Application US/08456033  
Patent No. 6495513  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OKAYNAK, ENGIN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
TITLE OF INVENTION: REPAIR.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk

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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/456,033
FILING DATE: 31-MAY-1995
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: FENTON BSG, GILLIAN M.
REGISTRATION NUMBER: 36,508
REFERENCE/DOCKET NUMBER: CRP-070DV
TELECOMMUNICATION INFORMATION:
TELEPHONE: (508) 435-9001
TELEFAX: (508) 435-6951
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 139 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
FEATURE:
NAME/KEY: Protein
LOCATION: 1..139
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"
US-08-456-033-5

Query Match          100.0%; Score 111, DB 4; Length 139;
Best Local Similarity 100.0%; Pred. No. 7.5e-08;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
Db 94 INPETHKPCCAPTOLNAIS 113

RESULT 71
US-08-643-321-4
Sequence 4, Application US/08643321
Patent No. 6498142
GENERAL INFORMATION:
APPLICANT: SAMPATH, KUBER T.
APPLICANT: COHEN, CHARLES M.
TITLE OF INVENTION: MORPHOGEN TREATMENT FOR CHRONIC
TITLE OF INVENTION: RENAL FAILURE
NUMBER OF SEQUENCES: 31
CORRESPONDENCE ADDRESS:
ADDRESSEE: TESTA, HURWITZ & THIBEAULT, LLP
STREET: 125 HIGH STREET
CITY: BOSTON
STATE: MA
COUNTRY: USA
ZIP: 02110
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/643,321
FILING DATE:
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: TWOMEY, MICHAEL J
REGISTRATION NUMBER: 38,349
REFERENCE/DOCKET NUMBER: CRP-118
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617/248-7100
TELEFAX: 617/248-7100
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 139 amino acids
TYPE: amino acid
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STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
TISSUE TYPE: HIPPOCAMPUS
FEATURE:
NAME/KEY: Protein
LOCATION: 1..139
OTHER INFORMATION: /label= hop1-MATURE
US-08-643-321-4

Query Match          100.0%; Score 111, DB 4; Length 139;
Best Local Similarity 100.0%; Pred. No. 7.5e-08;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
Db 94 INPETHKPCCAPTOLNAIS 113

RESULT 72
US-09-464-206-5
Sequence 5, Application US/09464206
Patent No. 6531445
GENERAL INFORMATION:
APPLICANT: Cohen, Charles M.
APPLICANT: KuberSampath, Thangavel
APPLICANT: Oppermann, Hermann
APPLICANT: Rueger, David C.
TITLE OF INVENTION: Protein Induced Morphogenesis
FILE REFERENCE: CEM-2 DIV (00960-502 DIV)
CURRENT APPLICATION NUMBER: US/09/464,206
PRIOR FILING DATE: 1999-12-15
PRIORITY APPLICATION NUMBER: 08/396,684
NUMBER OF SEQ ID NOS: 16
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 5
LENGTH: 139
TYPE: PRT
ORGANISM: Homo sapiens
FEATURE:
OTHER INFORMATION: tissue type hippocampus hop1-MATURE
US-09-464-206-5

Query Match          100.0%; Score 111, DB 4; Length 139;
Best Local Similarity 100.0%; Pred. No. 7.5e-08;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
Db 94 INPETHKPCCAPTOLNAIS 113

RESULT 73
US-08-404-113A-5
Sequence 5, Application US/08404113A
Patent No. 6565843
GENERAL INFORMATION:
APPLICANT: COHEN, CHARLES M.
APPLICANT: KUBERASAMPATH, THANGAVEL
APPLICANT: PANG, ROY H.T.
APPLICANT: OPPERMAN, HERMANN
APPLICANT: RUEGER, DAVID C.
TITLE OF INVENTION: PROTEIN-INDUCED TISSUE MORPHOGENESIS.
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: Testa, Hurwitz & Thibault
STREET: 125 High St.
CITY: Boston
STATE: MA
COUNTRY: USA
```

ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/404,113A  
FILING DATE: 14-MAR-1995  
CLASSIFICATION: 424  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., Gillian M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-052CP FWC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "hsp-1 (mature form)"  
US-08-404-113A-5  
Query Match 100.0%; Score 111; DB 4; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 94 INPETHKPCCAPTOLNAIS 113  
RESULT 74  
US-09-882-875A-1  
Sequence 1, Application US/09882875A  
Patent No. 6605117  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, Thangavel  
TITLE OF INVENTION: SYNTHETIC BONE MATRIX  
NUMBER OF SEQUENCES: 1  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Patent Administrator, Testa, Hurwitz &  
Thibault, LLP  
STREET: 125 High St.  
CITY: Boston  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/882,875A  
FILING DATE: 15-Jun-2001  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 09/104,865  
FILING DATE: 25-JUN-1998  
APPLICATION NUMBER: US 08/443,676  
FILING DATE: 18-MAY-1995  
APPLICATION NUMBER: US 07/529,852  
FILING DATE: 29-MAY-1990  
ATTORNEY/AGENT INFORMATION:

NAME: VITO, Christine C  
REGISTRATION NUMBER: 39,061  
REFERENCE/DOCKET NUMBER: STK-049CN2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 1:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: <Unknown>  
TOPOLOGY: linear  
MOLECULE TYPE: peptide  
SEQUENCE DESCRIPTION: SEQ ID NO: 1:  
US-09-882-875A-1  
Query Match 100.0%; Score 111; DB 4; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 94 INPETHKPCCAPTOLNAIS 113  
RESULT 75  
US-09-374-958C-68  
Sequence 68, Application US/09374958C  
Patent No. 6677432  
GENERAL INFORMATION:  
APPLICANT: Stryker Corporation  
TITLE OF INVENTION: Modified Proteins and DNAs of the TGF-beta Superfamily, Including  
TITLE OF INVENTION: Modified Morphogenic Proteins  
FILE REFERENCE: STK-076  
CURRENT APPLICATION NUMBER: US/09/374,958C  
CURRENT FILING DATE: 1999-08-16  
NUMBER OF SEQ ID NOS: 90  
SOFTWARE: Patentin version 2.0  
SEQ ID NO 68  
LENGTH: 139  
TYPE: PRT  
ORGANISM: Homo sapiens  
FEATURE:  
OTHER INFORMATION: Mature H2223 mutant  
US-09-374-958C-68  
Query Match 100.0%; Score 111; DB 4; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 94 INPETHKPCCAPTOLNAIS 113  
RESULT 76  
PCT-US92-01968-5  
Sequence 5, Application PC/TUS9201968  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: OPPERMANN, HERMANN  
APPLICANT: PANG, ROY H.  
APPLICANT: RUEGER, DAVID C  
TITLE OF INVENTION: PROTEIN-INDUCED MORPHOGENESIS  
NUMBER OF SEQUENCES: 23  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA HURWITZ & THIBAUT  
STREET: EXCHANGE PLACE 53 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02109

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US92/01968  
FILING DATE: 19920311  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 667,274  
FILING DATE: 11-MAR-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 752,764  
FILING DATE: 30-AUG-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-052PC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: AMINO ACID  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
ORIGINAL SOURCE:  
ORGANISM: Homo sapiens  
TISSUE TYPE: HIPPOCAMPUS  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /label= hop1-MATURE  
PCT-US92-01968-5

Query Match 100.0%; Score 111; DB 5; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 94 INPETHKPCCAPTOLNAIS 113

RESULT 77  
PCT-US93-07190-5  
Sequence 5, Application PC/TUS9307190  
GENERAL INFORMATION:  
APPLICANT:  
TITLE OF INVENTION: MORPHOGEN-ENRICHED DIETARY COMPOSITION  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC.  
STREET: 35 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US93/07190  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY, ROBIN D.  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP-071  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000

TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
ORIGINAL SOURCE:  
ORGANISM: Homo sapiens  
TISSUE TYPE: HIPPOCAMPUS  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /label= hop1-MATURE  
PCT-US93-07190-5

Query Match 100.0%; Score 111; DB 5; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 94 INPETHKPCCAPTOLNAIS 113

RESULT 78  
PCT-US93-07231-5  
Sequence 5, Application PC/TUS9307231  
GENERAL INFORMATION:  
APPLICANT:  
TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC.  
STREET: 35 SOUTH STREET  
CITY: HOPKINTON  
STATE: MASSACHUSETTS  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US93/07231  
FILING DATE: 19930729  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY, ROBIN D.  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP-070  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
ORIGINAL SOURCE:  
ORGANISM: Homo sapiens  
TISSUE TYPE: HIPPOCAMPUS  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /label= hop1-MATURE  
PCT-US93-07231-5

Query Match 100.0%; Score 111; DB 5; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHPKPCCAPTOLNAIS 20  
|||  
Db 94 INPETHPKPCCAPTOLNAIS 113

RESULT 79  
PCT-US93-08742-5  
Sequence 5, Application PC/TUS9308742  
GENERAL INFORMATION:  
APPLICANT:  
TITLE OF INVENTION: MORPHOGEN-INDUCED PERIODONTAL TISSUE REGENERATION  
NUMBER OF SEQUENCES: 3  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC.  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US93/08742  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY ESO, ROBIN D.  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP-067  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7477  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
ORIGINAL SOURCE:  
ORGANISM: Homo sapiens  
TISSUE TYPE: HIPPOCAMPUS  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /label= hop1-MATURE  
PCT-US93-08742-5

Query Match 100.0%; Score 111; DB 5; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHPKPCCAPTOLNAIS 20  
|||  
Db 94 INPETHPKPCCAPTOLNAIS 113

RESULT 80  
PCT-US93-08808-5  
Sequence 5, Application PC/TUS9308808  
GENERAL INFORMATION:  
APPLICANT:  
TITLE OF INVENTION: MORPHOGEN-INDUCED LIVER REGENERATION

NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC.  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US93/08808  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY ESO, ROBIN D.  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP-072  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7477  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
ORIGINAL SOURCE:  
ORGANISM: Homo sapiens  
TISSUE TYPE: HIPPOCAMPUS  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /label= hop1-MATURE  
PCT-US93-08808-5

Query Match 100.0%; Score 111; DB 5; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHPKPCCAPTOLNAIS 20  
|||  
Db 94 INPETHPKPCCAPTOLNAIS 113

RESULT 81  
PCT-US93-08885-5  
Sequence 5, Application PC/TUS9308885  
GENERAL INFORMATION:  
APPLICANT:  
TITLE OF INVENTION: MORPHOGEN TREATMENT OF GASTROINTESTINAL  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC.  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US93/08885  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY ESQ. ROBIN D.  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP-074  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7477  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
ORIGINAL SOURCE:  
ORGANISM: Homo sapiens  
TISSUE TYPE: HIPPOCAMPUS  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /label= hsp1-MATURE  
PCT-US93-08885-5

Query Match 100.0%; Score 111; DB 5; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCAPTOLNALS 20  
Db 94 INPETHKPCAPTOLNALS 113

RESULT 82  
PCT-US94-13181-10  
Sequence 10, Application PC/TUS9413181  
GENERAL INFORMATION:  
APPLICANT: GENETICS INSTITUTE, INC.  
TITLE OF INVENTION: MUTANTS OF BONE MORPHOGENIC PROTEINS  
NUMBER OF SEQUENCES: 12  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Genetics Institute, Inc - Legal Affairs  
STREET: 87 Cambridgepark Drive  
CITY: Cambridge  
STATE: Massachusetts  
COUNTRY: USA  
ZIP: 02140  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US94/13181  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/163,877  
FILING DATE: December 7, 1993  
ATTORNEY/AGENT INFORMATION:  
NAME: Lazar, Steven R.  
REGISTRATION NUMBER: 32,618  
REFERENCE/DOCKET NUMBER: GI 5219-PCT  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617 498-8260  
TELEFAX: 617 876-5851  
INFORMATION FOR SEQ ID NO: 10:  
SEQUENCE CHARACTERISTICS:

LENGTH: 139 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
PCT-US94-13181-10

Query Match 100.0%; Score 111; DB 5; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCAPTOLNALS 20  
Db 94 INPETHKPCAPTOLNALS 113

RESULT 83  
US-08-621-803-249  
Sequence 249, Application US/08621803  
Patent No. 5851802  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
FUSION PROTEINS AND BPI-DERIVED PEPTIDES  
NUMBER OF SEQUENCES: 265  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/621,803  
FILING DATE: 22-MAR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 249:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 161 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-621-803-249

Query Match 100.0%; Score 111; DB 2; Length 161;  
Best Local Similarity 100.0%; Pred. No. 8.7e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCAPTOLNALS 20  
Db 116 INPETHKPCAPTOLNALS 135

RESULT 84  
US-09-271-970-2  
Sequence 2, Application US/09271970  
Patent No. 6242219  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
APPLICANT: Gavitt, Patrick D.  
TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production  
FILE REFERENCE: 1103/1104US01

;; CURRENT APPLICATION NUMBER: US/09/271,970  
;; CURRENT FILING DATE: 1999-03-18  
;; NUMBER OF SEQ ID NOS: 16  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 2  
;; LENGTH: 161  
;; TYPE: PRT  
;; ORGANISM: Human  
US-09-271-970-2

Query Match 100.0%; Score 111; DB 3; Length 161;  
Best Local Similarity 100.0%; Pred. No. 8,7e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 116 INPETHKPCCAPTOLNAIS 135

RESULT 85  
US-09-217-352-249  
; Sequence 249, Application US/09217352  
; Patent No. 6274344  
; GENERAL INFORMATION:  
; APPLICANT: Better, Marc D.  
; TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
; NUMBER OF SEQUENCES: 265  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/217,352  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/621,803  
FILING DATE: 22-MAR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 249:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 161 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-217-352-249

Query Match 100.0%; Score 111; DB 3; Length 161;  
Best Local Similarity 100.0%; Pred. No. 8,7e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 116 INPETHKPCCAPTOLNAIS 135

RESULT 86  
US-09-760-397-2

;; Sequence 2, Application US/09760397  
;; Patent No. 6500648  
;; GENERAL INFORMATION:  
;; APPLICANT: Better, Marc D.  
;; APPLICANT: Gavitt, Patrick D.  
;; TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production  
;; FILE REFERENCE: 1103/11941US01  
;; CURRENT APPLICATION NUMBER: US/09/760,397  
;; CURRENT FILING DATE: 2001-01-12  
;; PRIOR APPLICATION NUMBER: 09/271,970  
;; PRIOR FILING DATE: 1999-03-18  
;; NUMBER OF SEQ ID NOS: 16  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 2  
;; LENGTH: 161  
;; TYPE: PRT  
;; ORGANISM: Human  
US-09-760-397-2

Query Match 100.0%; Score 111; DB 4; Length 161;  
Best Local Similarity 100.0%; Pred. No. 8,7e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 116 INPETHKPCCAPTOLNAIS 135

RESULT 87  
US-07-841-646-9  
; Sequence 9, Application US/07841646  
; Patent No. 5266683  
; GENERAL INFORMATION:  
; APPLICANT: OPPERMAN, HERMANN  
; APPLICANT: OKAYNAK, ENGIN  
; APPLICANT: KUBERASAMPATH, THANGAVEL  
; APPLICANT: RUBER, DAVID C.  
; APPLICANT: PANG, ROY H.L.  
; TITLE OF INVENTION: OSTEOGENIC DEVICES  
; NUMBER OF SEQUENCES: 33  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
; STREET: 53 STATE STREET  
; CITY: BOSTON  
; STATE: MASSACHUSETTS  
; COUNTRY: U.S.A.  
; ZIP: 02109  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/841,646  
FILING DATE: 19920221  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374



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us-10-619-910-11.oct24.ra1

Page 35

FILED DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7100  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 9:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 169 amino acids  
TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-07-841-646-9

Query Match 100.0%; Score 111; DB 1; Length 169;  
Best Local Similarity 100.0%; Pred. No. 9.1e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPTOLNIS 20  
Db 124 INPETHKPCAPTOLNIS 143

RESULT 88  
US-08-147-023-9  
Sequence 9, Application US/08147023  
Patent No. 5468845  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESS: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/147,023  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7100  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 9:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 169 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-147-023-9

Query Match 100.0%; Score 111; DB 1; Length 169;  
Best Local Similarity 100.0%; Pred. No. 9.1e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPTOLNIS 20

Db 124 INPETHKPCCAPTQJLNIS 143

RESULT 89  
US-08-447-570-9  
Sequence 9, Application US/08447570  
Patent No. 5714569  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVAL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 536  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 573,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 9:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 169 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-447-570-9  
Query Match 100.0%; Score 111; DB 1; Length 169;  
Best Local Similarity 100.0%; Pred. No. 9, 1e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQJLNIS 20  
Db 124 INPETHKPCCAPTQJLNIS 143

RESULT 90  
US-08-449-700-9  
Sequence 9, Application US/08449700  
Patent No. 5863758  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVAL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/449,700  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7100  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 9:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 169 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-449-700-9

Query Match 100.0%; Score 111; DB 2; Length 169;  
Best Local Similarity 100.0%; Pred. No. 9,1e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNALS 20  
DB 124 INPETHKPCCAPTOLNALS 143

RESULT 91  
US-08-449-699A-9  
Sequence 9, Application US/08449699A  
Patent No. 5958441  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OKRAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: ANTIBODIES TO OSTEOGENIC PROTEINS  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/449,699A  
FILING DATE: 24-MAY-1995  
CLASSIFICATION: 424  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 01-NOV-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: STR-001CP6CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 9:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 169 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-449-699A-9

Query Match 100.0%; Score 111; DB 2; Length 169;  
Best Local Similarity 100.0%; Pred. No. 9,1e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNALS 20  
DB 124 INPETHKPCCAPTOLNALS 143

RESULT 92  
US-09-148-925C-9  
Sequence 9, Application US/09148925C  
Patent No. 6551995  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OKRAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/148,925C  
FILING DATE: 04-SEP-1998  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 09/148,925  
FILING DATE: 8-SEP-1998  
APPLICATION NUMBER: US 08/449,699  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865

FILED DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: DIANA M. STEEL  
REGISTRATION NUMBER: 43,153  
REFERENCE/DOCKET NUMBER: STX-001CP6C3  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 9:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 169 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
OTHER INFORMATION: /PRODUCT="OPLA"  
SEQUENCE DESCRIPTION: SEQ ID NO: 9:  
US-09-148-925C-9  
Query Match 100.0%; Score 111; DB 4; Length 169;  
Best Local Similarity 100.0%; Pred. No. 9,1e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
CY 1 INPETHKPCAPTOLNIS 20  
DB 124 INPETHKPCAPTOLNIS 143  
RESULT 93  
US-08-957-425-9  
Sequence 9, Application US/08957425  
Patent No. 6586388  
GENERAL INFORMATION:  
APPLICANT: OPPERMANN, HERMANN  
OKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESS: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET

CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/957,425  
FILING DATE: 24-OCT-1997  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDWARD R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 9:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 169 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 9:  
US-08-957-425-9  
Query Match 100.0%; Score 111; DB 4; Length 169;  
Best Local Similarity 100.0%; Pred. No. 9,1e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
CY 1 INPETHKPCAPTOLNIS 20  
DB 124 INPETHKPCAPTOLNIS 143  
RESULT 94  
US-09-271-970-8

; Sequence 8, Application US/09271970  
; Patent No. 6242219  
; GENERAL INFORMATION:  
; APPLICANT: Better, Marc D.  
; APPLICANT: Gavitt, Patrick D.  
; TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production  
; FILE REFERENCE: 1103/11041US01  
; CURRENT APPLICATION NUMBER: US/09/271,970  
; CURRENT FILING DATE: 1999-03-18  
; NUMBER OF SEQ ID NOS: 16  
; SOFTWARE: Patent In Ver. 2.0  
; SEQ ID NO 8  
; LENGTH: 178  
; TYPE: PRT  
; ORGANISM: Human  
; US-09-271-970-8

Query Match 100.0%; Score 111; DB 3; Length 178;  
Best Local Similarity 100.0%; Pred. No. 9.6e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNAIS 20  
Db 116 INPETHKPCCAPTOLNAIS 135

RESULT 95  
US-09-760-397-8  
; Sequence 8, Application US/09760397  
; Patent No. 6500648  
; GENERAL INFORMATION:  
; APPLICANT: Better, Marc D.  
; APPLICANT: Gavitt, Patrick D.  
; TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production  
; FILE REFERENCE: 1103/11041US01  
; CURRENT APPLICATION NUMBER: US/09/760,397  
; CURRENT FILING DATE: 2001-01-12  
; PRIOR APPLICATION NUMBER: 09/271,970  
; PRIOR FILING DATE: 1999-03-18  
; NUMBER OF SEQ ID NOS: 16  
; SOFTWARE: Patent In Ver. 2.0  
; SEQ ID NO 8  
; LENGTH: 178  
; TYPE: PRT  
; ORGANISM: Human  
; US-09-760-397-8

Query Match 100.0%; Score 111; DB 4; Length 178;  
Best Local Similarity 100.0%; Pred. No. 9.6e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNAIS 20  
Db 116 INPETHKPCCAPTOLNAIS 135

RESULT 96  
US-08-621-803-257  
; Sequence 257, Application US/08621803  
; Patent No. 5851802  
; GENERAL INFORMATION:  
; APPLICANT: Better, Marc D.  
; TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
; TITLE OF INVENTION: Fusion Proteins and BPI-Derived Peptides  
; NUMBER OF SEQUENCES: 265  
; CORRESPONDENCE ADDRESSES:  
; ADDRESSES: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:

MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/621,803  
FILING DATE: 22-MAR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 257:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 179 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-621-803-257

Query Match 100.0%; Score 111; DB 2; Length 179;  
Best Local Similarity 100.0%; Pred. No. 9.6e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNAIS 20  
Db 116 INPETHKPCCAPTOLNAIS 135

RESULT 97  
US-08-621-803-261  
; Sequence 261, Application US/08621803  
; Patent No. 5851802  
; GENERAL INFORMATION:  
; APPLICANT: Better, Marc D.  
; TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
; TITLE OF INVENTION: Fusion Proteins and BPI-Derived Peptides  
; NUMBER OF SEQUENCES: 265  
; CORRESPONDENCE ADDRESSES:  
; ADDRESSES: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/621,803  
FILING DATE: 22-MAR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 261:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 179 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-621-803-261

Query Match 100.0%; Score 111; DB 2; Length 179;

Best Local Similarity 100.0%; Pred. No. 9.6e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTOLNNAIS 20  
Db 116 INPETHKPCCAPTOLNNAIS 135

RESULT 98  
US-09-217-352-257  
Sequence 257, Application US/09217352  
Patent No. 6274344  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
TITLE OF INVENTION: Fusion Proteins and BPI-Derived Peptides  
NUMBER OF SEQUENCES: 265  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/217,352  
FILING DATE:  
PRIORITY APPLICATION DATA:  
APPLICATION NUMBER: 08/621,803  
FILING DATE: 22-MAR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 257:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 179 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-217-352-257

Query Match 100.0%; Score 111; DB 3; Length 179;  
Best Local Similarity 100.0%; Pred. No. 9.6e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTOLNNAIS 20  
Db 116 INPETHKPCCAPTOLNNAIS 135  
RESULT 99  
US-09-217-352-261  
Sequence 261, Application US/09217352  
Patent No. 6274344  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
TITLE OF INVENTION: Fusion Proteins and BPI-Derived Peptides  
NUMBER OF SEQUENCES: 265  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago

STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/217,352  
FILING DATE:  
PRIORITY APPLICATION DATA:  
APPLICATION NUMBER: 08/621,803  
FILING DATE: 22-MAR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 261:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 179 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-217-352-261  
Query Match 100.0%; Score 111; DB 3; Length 179;  
Best Local Similarity 100.0%; Pred. No. 9.6e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTOLNNAIS 20  
Db 116 INPETHKPCCAPTOLNNAIS 135

RESULT 100  
US-09-271-970-14  
Sequence 14, Application US/09271970  
Patent No. 6242219  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production  
FILE REFERENCE: 1103/1104US01  
CURRENT APPLICATION NUMBER: US/09/271,970  
FILING DATE: 1999-03-18  
NUMBER OF SEQ ID NOS: 16  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 14  
LENGTH: 190  
TYPE: PPT  
ORGANISM: Human  
US-09-271-970-14

Query Match 100.0%; Score 111; DB 3; Length 190;  
Best Local Similarity 100.0%; Pred. No. 1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTOLNNAIS 20  
Db 116 INPETHKPCCAPTOLNNAIS 135  
RESULT 101  
US-09-760-397-14  
Sequence 14, Application US/09760397  
Patent No. 6500648  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.

APPLICANT: Gavit, Patrick D.  
TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production  
FILE REFERENCE: 1103/1104US01  
CURRENT APPLICATION NUMBER: US/09/760,397  
CURRENT FILING DATE: 2001-01-12  
PRIOR APPLICATION NUMBER: 09/271,970  
PRIOR FILING DATE: 1999-03-18  
NUMBER OF SEQ ID NOS: 16  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO: 14  
LENGTH: 190  
TYPE: PRT  
ORGANISM: Human  
US-09-760-397-14

Query Match 100.0%; Score 111; DB 4; Length 190;  
Best Local Similarity 100.0%; Pred. No. 1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCAPTOLNALS 20  
Db 116 INPETHKPCAPTOLNALS 135

RESULT 102  
US-08-621-803-255  
Sequence 255, Application US/08621803  
Patent No. 5851802  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
TITLE OF INVENTION: Fusion Proteins and BPI-Derived Peptides  
NUMBER OF SEQUENCES: 265  
CORRESPONDENCE ADDRESS:  
ADDRESS: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/621,803  
FILING DATE: 22-MAR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 255:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 194 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-621-803-255

Query Match 100.0%; Score 111; DB 2; Length 194;  
Best Local Similarity 100.0%; Pred. No. 1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCAPTOLNALS 20  
Db 116 INPETHKPCAPTOLNALS 135

RESULT 103  
US-09-217-352-255  
Sequence 255, Application US/09217352  
Patent No. 6274344  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
TITLE OF INVENTION: Fusion Proteins and BPI-Derived Peptides  
NUMBER OF SEQUENCES: 265  
CORRESPONDENCE ADDRESS:  
ADDRESS: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/217,352  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/621,803  
FILING DATE: 22-MAR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 255:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 194 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-217-352-255

Query Match 100.0%; Score 111; DB 3; Length 194;  
Best Local Similarity 100.0%; Pred. No. 1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCAPTOLNALS 20  
Db 116 INPETHKPCAPTOLNALS 135

RESULT 104  
US-08-621-803-263  
Sequence 263, Application US/08621803  
Patent No. 5851802  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
TITLE OF INVENTION: Fusion Proteins and BPI-Derived Peptides  
NUMBER OF SEQUENCES: 265  
CORRESPONDENCE ADDRESS:  
ADDRESS: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/621,803  
FILING DATE: 22-MAR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 263:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 195 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-621-803-263

Query Match 100.0%; Score 111; DB 2; Length 195;  
Best Local Similarity 100.0%; Pred. No. 1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNALS 20  
DB 116 INPETHKPCCAPTOLNALS 135

RESULT 105  
US-09-217-352-263  
Sequence 263 Application US/09217352  
Patent No. 6274344  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
TITLE OF INVENTION: Fusion Proteins and BPI-Derived Peptides  
NUMBER OF SEQUENCES: 265  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/217,352  
FILING DATE:  
PRIOR APPLICATION DATA:  
PRIOR APPLICATION NUMBER: 08/621,803  
FILING DATE: 22-MAR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 263:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 195 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-217-352-263

Query Match 100.0%; Score 111; DB 3; Length 195;  
Best Local Similarity 100.0%; Pred. No. 1e-07;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNALS 20  
DB 116 INPETHKPCCAPTOLNALS 135

RESULT 106  
US-07-841-646-11  
Sequence 11, Application US/07841646  
Patent No. 526683  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/841,646  
FILING DATE: 19920221  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342



FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 317 amino acids  
TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-07-841-646-11

Query Match 100.0%; Score 111; DB 1; Length 317;  
Best Local Similarity 100.0%; Pred. No. 1,7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNALS 20  
Db 272 INPETHKPCCAPTOLNALS 291

RESULT 107  
US-08-147-023-11  
Sequence 11, Application US/08147023  
Patent No. 3468845  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/147,023  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849

FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 317 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-147-023-11

Query Match 100.0%; Score 111; DB 1; Length 317;  
Best Local Similarity 100.0%; Pred. No. 1,7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNALS 20  
Db 272 INPETHKPCCAPTOLNALS 291

RESULT 108  
US-08-447-570-11  
Sequence 11, Application US/08447570  
Patent No. 5714589  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.

ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: FLOPPY disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 536  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 317 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-447-570-11

Query Match 100.0%; Score 111; DB 1; Length 317;  
Best Local Similarity 100.0%; Pred. No. 1.7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPTOJN1S 20  
Db 272 INPETHKPCAPTOJN1S 291  
RESULT 109  
US-08-449-700-11  
Sequence 11, Application US/08449700  
Patent No. 5863758  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: FLOPPY disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/449,700  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CB6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 317 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
US-08-449-700-11

Query Match 100.0%; Score 111; DB 2; Length 317;  
Best Local Similarity 100.0%; Pred. No. 1.7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPTOLNALS 20  
DB 272 INPETHKPCAPTOLNALS 291

RESULT 110  
US-08-449-699A-11  
Sequence 11, Application US/08449699A  
Patent No. 5958441  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIV  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: ANTIBODIES TO OSTEOGENIC PROTEINS  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/449,699A  
FILING DATE: 24-MAY-1995  
CLASSIFICATION: 424  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 01-NOV-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: STR-001CP6CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 317 amino acids  
TYPE: amino acid  
TOPOLOGY: linear

MOLECULE TYPE: protein  
US-08-449-699A-11

Query Match 100.0%; Score 111; DB 2; Length 317;  
Best Local Similarity 100.0%; Pred. No. 1.7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPTOLNALS 20  
DB 272 INPETHKPCAPTOLNALS 291

RESULT 111  
US-09-148-925C-11  
Sequence 11, Application US/09148925C  
Patent No. 6551995  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIV  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/148,925C  
FILING DATE: 04-SEP-1998  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 09/148,925  
FILING DATE: 8-SEP-1998  
APPLICATION NUMBER: US 08/449,699  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988

APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: DIANA M. STEEL  
REGISTRATION NUMBER: 43,153  
REFERENCE/DOCKET NUMBER: STR-001CP6C3  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 317 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
OTHER INFORMATION: /product="OPIB"  
SEQUENCE DESCRIPTION: SEQ ID NO: 11:  
US-09-148-925C-11  
Query Match 100.0%; Score 111; DB 4; Length 317;  
Best Local Similarity 100.0%; Pred. No. 1.7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCAPTOLNALS 20  
DB 272 INPETHKPCAPTOLNALS 291  
RESULT 112  
US-08-957-425-11  
Sequence 11, Application US/08957425  
Patent No. 6586388  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
OKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
ROBER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HIRWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC COMPATIBLE  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/957,425  
FILING DATE: 24-OCT-1997  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 660,162

FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDWARD R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 317 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 11:  
US-08-957-425-11  
Query Match 100.0%; Score 111; DB 4; Length 317;  
Best Local Similarity 100.0%; Pred. No. 1.7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCAPTOLNALS 20  
DB 272 INPETHKPCAPTOLNALS 291  
RESULT 113  
US-07-764-731B-10  
Sequence 10, Application US/07764731B  
Patent No. 5366875  
GENERAL INFORMATION:  
APPLICANT: ROSEN, YACKI A.  
APPLICANT: MANG, ELIZABETH A.  
APPLICANT: MOZNEY, JOHN M.  
TITLE OF INVENTION: Methods for Producing BMP-7 Proteins  
NUMBER OF SEQUENCES: 10  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Legal Affairs, Genetics Institute, Inc.  
STREET: 87 Cambridgepark Drive  
CITY: Cambridge  
STATE: MA  
COUNTRY: USA  
ZIP: 02140  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC COMPATIBLE  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:

```

      APPLICATION NUMBER: US/07/764,731B
      FILING DATE: 19910924
      CLASSIFICATION: 435
      ATTORNEY/AGENT INFORMATION:
      NAME: Kapinos, Ellen J
      REGISTRATION NUMBER: 32,245
      REFERENCE/DOCKET NUMBER: G15159B
      TELECOMMUNICATION INFORMATION:
      TELEPHONE: 617-876-1170
      TELEFAX: 617-876-5851
      INFORMATION FOR SEQ ID NO: 10:
      SEQUENCE CHARACTERISTICS:
      LENGTH: 400 amino acids
      TYPE: AMINO ACID
      TOPOLOGY: linear
      MOLECULE TYPE: protein
      US-07-764-731B-10

Query Match      100.0%; Score 111; DB 1; Length 400;
Best Local Similarity 100.0%; Pred. NO. 2.2e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 INPETHKPCAPTOLNIAIS 20
Db      355 INPETHKPCAPTOLNIAIS 374

RESULT 114
US-07-841-646-15
Sequence 15, Application US/07841646
Patent No. 5265683
GENERAL INFORMATION:
APPLICANT: OPPERMAN, HERMANN
APPLICANT: OZKAYNAK, ENGIN
APPLICANT: KUBERASAMPATH, THANGAVEL
APPLICANT: RUEGER, DAVID C.
APPLICANT: PANG, ROY H.L.
TITLE OF INVENTION: OSTEOGENIC DEVICES
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
ADDRESS: TESTA, HURWITZ & THIBEAULT
STREET: 53 STATE STREET
CITY: BOSTON
STATE: MASSACHUSETTS
COUNTRY: U.S.A.
ZIP: 02109
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/841,646
FILING DATE: 19920221
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 810,560
FILING DATE: 20-DEC-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 827,052
FILING DATE: 28-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 660,162
FILING DATE: 22-FEB-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 621,988
FILING DATE: 04-DEC-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 621,849
FILING DATE: 04-DEC-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 616,374
FILING DATE: 21-NOV-1990

      PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 600,024
      FILING DATE: 18-OCT-1990
      PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 599,543
      FILING DATE: 18-OCT-1990
      PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 579,865
      FILING DATE: 07-SEP-1990
      PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 569,920
      FILING DATE: 20-AUG-1990
      PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 483,913
      FILING DATE: 22-FEB-1990
      PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 422,613
      FILING DATE: 17-OCT-1989
      PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 315,342
      FILING DATE: 23-FEB-1989
      PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 232,630
      FILING DATE: 15-AUG-1988
      PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 179,460
      FILING DATE: 08-APR-1988
      ATTORNEY/AGENT INFORMATION:
      NAME: FITCHER, EDMOND R.
      REGISTRATION NUMBER: 27,829
      REFERENCE/DOCKET NUMBER: CRP-001CP6
      TELECOMMUNICATION INFORMATION:
      TELEPHONE: 617/248-7000
      TELEFAX: 617/248-7100
      INFORMATION FOR SEQ ID NO: 15:
      SEQUENCE CHARACTERISTICS:
      LENGTH: 408 amino acids
      TYPE: AMINO ACID
      TOPOLOGY: linear
      MOLECULE TYPE: protein
      US-07-841-646-15

Query Match      100.0%; Score 111; DB 1; Length 408;
Best Local Similarity 100.0%; Pred. NO. 2.2e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 INPETHKPCAPTOLNIAIS 20
Db      363 INPETHKPCAPTOLNIAIS 382

RESULT 115
US-08-147-023-15
Sequence 15, Application US/08147023
Patent No. 546845
GENERAL INFORMATION:
APPLICANT: OPPERMAN, HERMANN
APPLICANT: OZKAYNAK, ENGIN
APPLICANT: KUBERASAMPATH, THANGAVEL
APPLICANT: RUEGER, DAVID C.
APPLICANT: PANG, ROY H.L.
TITLE OF INVENTION: OSTEOGENIC DEVICES
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
ADDRESS: TESTA, HURWITZ & THIBEAULT
STREET: 53 STATE STREET
CITY: BOSTON
STATE: MASSACHUSETTS
COUNTRY: U.S.A.
ZIP: 02109
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
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OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,023  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 15:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 408 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-147-023-15

Query Match 100.0%; Score 111; DB 1; Length 408;  
Best Local Similarity 100.0%; Pred. No. 2,2e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 363 INPETHKPCCAPTOLNAIS 382

RESULT 116  
US-08-447-570-15  
Sequence 15, Application US/08447570  
Patent No. 5714589  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OZKAYNAK, ENGİN  
APPLICANT: KUBERASAPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H. L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 536  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 15:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 408 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-447-570-15

Query Match 100.0%; Score 111; DB 1; Length 408;  
Best Local Similarity 100.0%; Pred. No. 2,2e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPEVPRKPCAPTOIQAIS 20  
Db 363 INPEVPRKPCAPTOIQAIS 382

RESULT 117  
US-08-449-700-15  
Sequence 15, Application US/08449700  
Patent No. 5863758  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H. I.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/449,700  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 15:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 408 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-449-700-15

Query Match 100.0%; Score 111; DB 2; Length 408;  
Best Local Similarity 100.0%; Pred. No. 2,2e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPEVPRKPCAPTOIQAIS 20  
Db 363 INPEVPRKPCAPTOIQAIS 382

RESULT 118  
US-08-449-699A-15  
Sequence 15, Application US/08449699A  
Patent No. 5958441  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H. I.  
TITLE OF INVENTION: ANTIBODIES TO OSTEOGENIC PROTEINS  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/449,699A  
FILING DATE: 24-MAY-1995  
CLASSIFICATION: 424  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 01-NOV-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: STK-001CP6CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 15:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 408 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-449-699A-15

Query Match 100.0%; Score 111; DB 2; Length 408;  
Best Local Similarity 100.0%; Pred. No. 2.2e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 363 INPETHKPCCAPTOLNAIS 382

RESULT 119  
US-09-148-925C-15  
Sequence 15, Application US/09148925C  
Patent No. 6551995  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/148,925C  
FILING DATE: 04-Sep-1998  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 09/148,925  
FILING DATE: 8-SEP-1998  
APPLICATION NUMBER: US 08/449,699  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990

APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: DIANA M. STEEL  
REGISTRATION NUMBER: 43,153  
REFERENCE/DOCKET NUMBER: STK-001CP6C3  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 15:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 408 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
OTHER INFORMATION: /product="OP1D"  
SEQUENCE DESCRIPTION: SEQ ID NO: 15:  
US-09-148-925C-15

Query Match 100.0%; Score 111; DB 4; Length 408;  
Best Local Similarity 100.0%; Pred. No. 2.2e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 363 INPETHKPCCAPTOLNAIS 382

RESULT 120  
US-08-957-425-15  
Sequence 15, Application US/08957425  
Patent No. 6586388  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON



STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
FILING DATE: 24-Oct-1997  
CLASSIFICATION: <unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-FEB-1991  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDWARD R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CF6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 15:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 408 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 15:  
US-08-957-425-15

Query Match 100.0%; Score 111; DB 4; Length 408;  
Best Local Similarity 100.0%; Pred. No. 2.2e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPVTPKPCAPTOLNIS 20  
|||||  
DB 363 INPVTPKPCAPTOLNIS 382

RESULT 121  
US-07-841-646-2  
; Sequence 2, Application US/07841646

Patent No. 5266683  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGİN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H. L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
FILING DATE: 19920221  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDWARD R.  
REGISTRATION NUMBER: 27,829

REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-07-841-646-2

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
|||||  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 122  
US-07-901-703-2  
Sequence 2, Application US/07901703  
Patent No. 534654  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZAKAYNAK, ENGIN  
TITLE OF INVENTION: PROSTHETIC DEVICES HAVING ENHANCED  
TITLE OF INVENTION: OSTEOGENIC PROPERTIES  
NUMBER OF SEQUENCES: 22  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: EXCHANGE PLACE, 53 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/901,703  
FILING DATE: 19920616  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, ESQ., EDWARD R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: STK-057  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-07-901-703-2

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
|||||  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 123

US-07-539-756-4  
Sequence 4, Application US/07539756  
Patent No. 5364839  
GENERAL INFORMATION:  
APPLICANT: GERHART, TOBIN N.  
APPLICANT: WANG, ELIZABETH A.  
APPLICANT: KATZ, MARY JO  
TITLE OF INVENTION: OSTEOINDUCTIVE PHARMACEUTICAL  
TITLE OF INVENTION: FORMULATIONS  
NUMBER OF SEQUENCES: 4  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: GENETICS INSTITUTE, INC.  
STREET: LEGAL AFFAIRS - 87 CAMBRIDGE PARK DRIVE  
CITY: CAMBRIDGE  
STATE: MASSACHUSETTS  
COUNTRY: USA  
ZIP: 02140  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/539,756  
FILING DATE: 19900618  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: KEDANIELIS, PATRICIA A.  
REGISTRATION NUMBER: 33,194  
REFERENCE/DOCKET NUMBER: GI 5172  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 876-1170 X405  
TELEFAX: (617) 876-5851  
INFORMATION FOR SEQ ID NO: 4:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-07-539-756-4

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
|||||  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 124  
US-08-147-023-2  
Sequence 2, Application US/08147023  
Patent No. 5468845  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZAKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/147,023  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,968  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-147-023-2

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPTOLNIS 20  
|||||  
Db 386 INPETHKPCAPTOLNIS 405

QY 1 INPETHKPCAPTOLNIS 20  
|||||  
Db 386 INPETHKPCAPTOLNIS 405

RESULT 125  
US-08-206-864-2  
Sequence 2, Application US/08206864  
Patent No. 5610021  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C  
APPLICANT: JONES, WILLIAM K  
APPLICANT: TUCKER, RONALD F  
APPLICANT: OPPERMANN, HERMANN  
APPLICANT: OZKAYNAK, ERGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR  
TITLE OF INVENTION: RECOMBINANT OSTEOGENIC PROTEIN PRODUCTION  
NUMBER OF SEQUENCES: 6  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: PATENT ADMINISTRATOR/CREATIVE BIOMOLECULES,  
ADDRESSEE: INC.  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/206,864  
FILING DATE:  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/027,070  
FILING DATE: 04-MAR-1993  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-096  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-206-864-2

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPTOLNIS 20  
|||||  
Db 386 INPETHKPCAPTOLNIS 405

RESULT 126  
US-08-278-729A-17  
Sequence 17, Application US/08278729A  
Patent No. 5650276  
GENERAL INFORMATION:  
APPLICANT: SMART, JOHN  
APPLICANT: OPPERMANN, HERMANN  
APPLICANT: OZKAYNAK, ERGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H. L.

APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGENIC PROTEIN SCREENING METHOD  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/278,729A  
FILING DATE: 20-JUL-1994  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ., EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-058CPFW  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-278-729A-17

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 127  
US-08-480-528A-4  
Sequence 4, Application US/08480528A  
Patent No. 5652118  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGİN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: OP3-INDUCED MORPHOGENESIS  
NUMBER OF SEQUENCES: 13  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/480,528A  
FILING DATE: 07-JUN-1995  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:

NAME: FENTON ESQ., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-076FW  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 4:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-480-528A-4

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 128  
US-08-479-666-4  
Sequence 4, Application US/08479666  
Patent No. 5652337  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGİN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: OP3-INDUCED MORPHOGENESIS  
NUMBER OF SEQUENCES: 13  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/479,666  
FILING DATE: 07-JUN-1995  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON ESQ., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-076DV  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 4:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-479-666-4

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

Db 386 INPETYKPCCAPTQNLNALS 405

```
RESULT 129
US-08-155-343A-17
; Sequence 17, Application US/08155343A
; Patent No. 5656593
GENERAL INFORMATION:
APPLICANT: KUBERASAMPATH, THANGAVEL
APPLICANT: RUEGER, DAVID C.
APPLICANT: OPPERMAN, HERMAN
APPLICANT: COHEN, CHARLES M.
APPLICANT: PANG, ROY H.L.
TITLE OF INVENTION: MORPHOGENIC-INDUCED PERIODONTAL TISSUE
REGENERATION.
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES
CITY: HOPKINTON
STATE: MA
COUNTRY: USA
ZIP: 01748
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/155,343A
FILING DATE: 15-NOV-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: FENTON Esq., GILLIAN M.
REGISTRATION NUMBER: 36,508
REFERENCE/DOCKET NUMBER: CRP-0677M
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 248-7560
TELEFAX: (617) 248-7100
INFORMATION FOR SEQ ID NO: 17:
SEQUENCE CHARACTERISTICS:
LENGTH: 431 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-155-343A-17

Query Match 100.0%; Score 111; DB 1; Length 431;
Best Local Similarity 100.0%; Pred. No. 2,3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQNLNALS 20
Db 386 INPETYKPCCAPTQNLNALS 405

RESULT 130
US-08-406-672-17
; Sequence 17, Application US/08406672
; Patent No. 56744844
GENERAL INFORMATION:
APPLICANT: KUBERASAMPATH, THANGAVEL
APPLICANT: COHEN, CHARLES M.
APPLICANT: OPPERMAN, HERMAN
APPLICANT: OZKATNAK, ERGIN
APPLICANT: RUEGER, DAVID C.
APPLICANT: PANG, ROY H.L.
TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES
CITY: HOPKINTON
STATE: MA
COUNTRY: USA
ZIP: 01748
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/406,672
FILING DATE: 20-MAR-1995
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: FENTON Esq., GILLIAN M.
REGISTRATION NUMBER: 36,508
REFERENCE/DOCKET NUMBER: CRP-060CN
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 248-7560
TELEFAX: (617) 248-7100
INFORMATION FOR SEQ ID NO: 17:
SEQUENCE CHARACTERISTICS:
LENGTH: 431 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-406-672-17
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CITY: HOPKINTON
STATE: MA
COUNTRY: USA
ZIP: 01748
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/406,672
FILING DATE: 20-MAR-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 752,857
FILING DATE: 30-AUG-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 667,274
FILING DATE: 11-MAR-1991
ATTORNEY/AGENT INFORMATION:
NAME: FENTON Esq., GILLIAN M.
REGISTRATION NUMBER: 36,508
REFERENCE/DOCKET NUMBER: CRP-060CN
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 248-7560
TELEFAX: (617) 248-7100
INFORMATION FOR SEQ ID NO: 17:
SEQUENCE CHARACTERISTICS:
LENGTH: 431 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-406-672-17

Query Match 100.0%; Score 111; DB 1; Length 431;
Best Local Similarity 100.0%; Pred. No. 2,3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQNLNALS 20
Db 386 INPETYKPCCAPTQNLNALS 405

RESULT 131
US-08-643-563A-17
; Sequence 17, Application US/08643563A
; Patent No. 5707810
GENERAL INFORMATION:
APPLICANT: SMART, JOHN
APPLICANT: OPPERMAN, HERMAN
APPLICANT: OZKATNAK, ERGIN
APPLICANT: KUBERASAMPATH, THANGAVEL
APPLICANT: RUEGER, DAVID C.
APPLICANT: PANG, ROY H.L.
TITLE OF INVENTION: MORPHOGENIC PROTEIN SCREENING METHOD
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES
CITY: HOPKINTON
STATE: MA
COUNTRY: USA
ZIP: 01748
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/643,563A
FILING DATE: 06-MAY-1996
CLASSIFICATION: 435
```

ATTORNEY/AGENT INFORMATION:  
NAME: TWOMEY ESC, MICHAEL J.  
REGISTRATION NUMBER: 38,349  
REFERENCE/DOCKET NUMBER: CRP-058CN2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-643-563A-17

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 132  
US-08-447-570-2  
Sequence 2, Application US/08447570  
Patent No. 5714589  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZAYANAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 536  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: FITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-447-570-2

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 133  
US-08-643-763A-17  
Sequence 17, Application US/08643763A  
Patent No. 573878  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: MORPHOGENIC-INDUCED PERIODONTAL TISSUE  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.30

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/643,763A  
FILING DATE: 06-MAY-1996  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-067CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ. ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-643-763A-17

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNIAIS 20  
Db 386 INPETHKPCCAPTQLNIAIS 405

RESULT 134  
US-08-462-623-17  
Sequence 17, Application US/08462623  
Patent No. 5739107  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: CHARETTE, MARC F.  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT OF GASTROINTESTINAL  
TITLE OF INVENTION: ULCERS.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/462,623  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/445,882  
FILING DATE: 22-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-074CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ. ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids

TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-462-623-17

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNIAIS 20  
Db 386 INPETHKPCCAPTQLNIAIS 405

RESULT 135  
US-08-451-953A-17  
Sequence 17, Application US/08451953A  
Patent No. 5741641  
GENERAL INFORMATION:  
APPLICANT: SMART, JOHN  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGENIC PROTEIN SCREENING METHOD  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/451,953A  
FILING DATE: 26-MAY-1995  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: FITCHER Esq., EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-058CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ. ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-451-953A-17

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNIAIS 20  
Db 386 INPETHKPCCAPTQLNIAIS 405

RESULT 136  
US-08-459-346-2  
Sequence 2, Application US/08459346  
Patent No. 5834179  
GENERAL INFORMATION:

APPLICANT: JONES, WILLIAM K  
APPLICANT: TUCKER, RONALD F  
APPLICANT: RUEGER, DAVID C  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKANAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
TITLE OF INVENTION: NOVEL MORPHOGENIC PROTEIN COMPOSITIONS  
TITLE OF INVENTION: OF MATTER  
NUMBER OF SEQUENCES: 23  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR/CREATIVE BIOMOLECULES,  
INC.  
ADDRESS: 35 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/459,346  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/029,335  
FILING DATE: 04-MAR-1993  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/971,091  
FILING DATE: 03-NOV-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/946,235  
FILING DATE: 16-SEP-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/938,336  
FILING DATE: 08-AUG-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/923,780  
FILING DATE: 31-JUL-1992  
ATTORNEY/AGENT INFORMATION:  
NAME: FITCHER, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-081CP  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-459-346-2

Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2, 3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 137  
US-08-445-468A-17  
Sequence 17, Application US/08445468A  
Patent No. 5849686  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGEN-INDUCED LIVER REGENERATION

NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/445,468A  
FILING DATE: 22-MAY-1995  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON ESQ., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-072FW2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7100  
FAX: (617) 248-7560  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-445-468A-17

Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2, 3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 138  
US-08-901-200A-4  
Sequence 4, Application US/08901200A  
Patent No. 5854071  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKANAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: OP3-INDUCED MORPHOGENESIS  
NUMBER OF SEQUENCES: 15  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/901,200A  
FILING DATE: 28-JUL-1997  
CLASSIFICATION: 530  
ATTORNEY/AGENT INFORMATION:  
NAME: MEYERS, THOMAS C.  
REGISTRATION NUMBER: 36,989



Tue Oct 26 09:17:06 2004

us-10-619-910-11.oct124.ra1

Page 59

REFERENCE/DOCKET NUMBER: CRP-076DV2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 4:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-901-200A-4

Query Match 100.0%; Score 111, DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNLAIS 20  
Db 386 INPETHKPCCAPTOLNLAIS 405

RESULT 139  
US-08-481-337A-10  
Sequence 10, Application US/08481337A  
Patent No. 5863738  
GENERAL INFORMATION:  
APPLICANT: TEN DIKE, Peter  
APPLICANT: HELDIN, Carl-Henrik  
APPLICANT: MIYAZONO, Kohel T.  
APPLICANT: SAMPATH, Kuber T.  
TITLE OF INVENTION: Morphogenic Protein-Specific Cell  
TITLE OF INVENTION: Surface Receptors and Uses Therefor  
NUMBER OF SEQUENCES: 18  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: Testa, Hurwitz & Thibault  
STREET: 125 High St.  
CITY: Boston  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/481,337A  
FILING DATE: 02-JUN-1995  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: MEYERS, Thomas C.  
REGISTRATION NUMBER: 36,989  
REFERENCE/DOCKET NUMBER: CRP-097CP2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 10:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-481-337A-10

Query Match 100.0%; Score 111, DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNLAIS 20  
Db 386 INPETHKPCCAPTOLNLAIS 405

RESULT 140  
US-08-449-700-2  
Sequence 2, Application US/08449700  
Patent No. 5863758  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OKAYANAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/449,700  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 530  
PRIOR APPLICATION NUMBER: 530  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 810,560  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1986

ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-449-700-2

Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 141  
US-07-989-847-6  
Sequence 6, Application US/07989847  
Patent No. 5866364  
GENERAL INFORMATION:  
APPLICANT: Israel, David  
APPLICANT: Wolfman, Neil M.  
TITLE OF INVENTION: Recombinant Bone Morphogenetic Protein  
TITLE OF INVENTION: Heterodimers, Compositions and Methods of Use.  
NUMBER OF SEQUENCES: 30  
CORRESPONDENCE ADDRESS:  
ADDRESS: Legal Affairs, Genetics Institute, Inc.  
STREET: 87 Cambridgepark Drive  
CITY: Cambridge  
STATE: MA  
COUNTRY: USA  
ZIP: 02140-2387  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Tape  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/989,847  
FILING DATE:  
CLASSIFICATION: 436  
ATTORNEY/AGENT INFORMATION:  
NAME: Kaplan, Ellen J.  
REGISTRATION NUMBER: 32,245  
REFERENCE/DOCKET NUMBER: GI-5192B  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-876-1170  
TELEFAX: 617-876-5851  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-07-989-847-6

Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 142  
US-08-449-699A-2  
Sequence 2, Application US/08449699A  
Patent No. 5958441  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OKAYAK, ENGIN  
APPLICANT: KUBERAMPATH, THANGAVEL  
APPLICANT: RUBER, DAVID C.  
APPLICANT: PANG, ROY H. L.  
TITLE OF INVENTION: ANTIBODIES TO OSTEOGENIC PROTEINS  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESS: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/449,699A  
FILING DATE: 24-MAY-1995  
CLASSIFICATION: 424  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 01-NOV-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: STK-001CP6CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-449-699A-2

Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 143  
US-08-696-268B-4  
Sequence 4, Application US/08696268B  
Patent No. 5968752  
GENERAL INFORMATION:  
APPLICANT: ICHIO, HIDEORI  
APPLICANT: NISHITOH, HIDEKI  
APPLICANT: SAWATH, KUBER T.  
TITLE OF INVENTION: NOVEL SIGNALING RECEPTOR FOR  
TITLE OF INVENTION: MORPHOGENIC PROTEINS  
NUMBER OF SEQUENCES: 8  
CORRESPONDENCE ADDRESS:  
ADDRESS: Testa, Hurwitz & Thibault  
STREET: 125 High St.  
CITY: Boston  
STATE: MA  
COUNTRY: USA

ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/696,268B  
FILING DATE:  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: MEYERS, Thomas C.  
REGISTRATION NUMBER: 36,989  
REFERENCE/DOCKET NUMBER: CRP-117  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 4:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-696-268B-4

Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 144  
US-08-461-397A-17  
Sequence 17, Application US/08461397A  
Patent No. 5972884  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: CHARBET, MARC F.  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING  
TITLE OF INVENTION: PROLIFERATION OF EPITHELIAL CELLS.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/461,397A  
FILING DATE: 05-JUN-1995  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ., EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-074FW2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100

INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-461-397A-17

Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 145  
US-08-912-088-17  
Sequence 17, Application US/08912088  
Patent No. 5994131  
GENERAL INFORMATION:  
APPLICANT: SMART, JOHN  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGENIC PROTEIN SCREENING METHOD  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/912,088  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/278,729  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ., EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-058CPFW  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-912-088-17

Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 146  
US-08-278-730A-17  
Sequence 17, Application US/08278730A  
Patent No. 6022653  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: MORPHOGENIC-ENRICHED DIETARY COMPOSITION  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESS: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/278,730A  
FILING DATE: 20-JULY-1994  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-071FW  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-278-730A-17  
Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Qy 1 INPETHKPCCAPTQLNLAIS 20  
Db 386 INPETHKPCCAPTQLNLAIS 405  
RESULT 147  
US-08-458-811-2  
Sequence 2, Application US/08458811  
Patent No. 6027743  
GENERAL INFORMATION:  
APPLICANT: KHOURI, ROGER K.  
APPLICANT: KUMPATH, KUBER T.  
APPLICANT: RUEGER, DAVID C.  
TITLE OF INVENTION: MANUFACTURE OF AUTOGENOUS REPLACEMENT  
NUMBER OF SEQUENCES: 3  
CORRESPONDENCE ADDRESS:  
ADDRESS: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/458,811  
FILING DATE:  
CLASSIFICATION: 424  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY, ROBIN D.  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP-108  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-458-811-2  
Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Qy 1 INPETHKPCCAPTQLNLAIS 20  
Db 386 INPETHKPCCAPTQLNLAIS 405  
RESULT 148  
US-08-889-419-2  
Sequence 2, Application US/08889419  
Patent No. 6071708  
GENERAL INFORMATION:  
APPLICANT: JONES, WILLIAM K  
APPLICANT: TUCKER, RONALD F  
APPLICANT: RUEGER, DAVID C  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
TITLE OF INVENTION: NOVEL MORPHOGENIC PROTEIN COMPOSITIONS  
NUMBER OF SEQUENCES: 23  
CORRESPONDENCE ADDRESS:  
ADDRESS: Patent Administrator, Testa, Hurwitz &  
ADDRESS: Thibault, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/889,419  
FILING DATE: 08-JUL-1997  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 06/459,346  
FILING DATE: 02-JUN-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: MEYERS, THOMAS C.  
REGISTRATION NUMBER: 36,989  
REFERENCE/DOCKET NUMBER: CRP-081DVCN  
INFORMATION FOR SEQ ID NO: 2:

Tue Oct 26 09:17:06 2004

us-10-619-910-11.oct24.ra1

Page 63

SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-889-419-2

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETYKPCCAPTQLNMAIS 20  
Db 386 INPETYKPCCAPTQLNMAIS 405

RESULT 149  
US-08-445-467-17  
Sequence 17, Application US/08445467  
Patent No. 6077823  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: PANG, ROY H.L.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: OZKANAK, ENGIN  
APPLICANT: SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN-INDUCED MODULATION OF  
TITLE OF INVENTION: INFLAMMATORY RESPONSE  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC.  
STREET: 35 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/445,467  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/165,511  
FILING DATE: US/07/938,336  
APPLICATION NUMBER: US/07/938,336  
FILING DATE:  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/753,059  
FILING DATE: 30-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESO, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-059CC3.APP  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7100  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein

US-08-445-467-17  
Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETYKPCCAPTQLNMAIS 20  
Db 386 INPETYKPCCAPTQLNMAIS 405

RESULT 150  
US-08-480-515A-17  
Sequence 17, Application US/08480515A  
Patent No. 6090776  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: PANG, ROY H.L.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT OF ORGAN TRANSPLANTS  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/480,515A  
FILING DATE: 07-JUN-1995  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-068FWC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-480-515A-17  
Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETYKPCCAPTQLNMAIS 20  
Db 386 INPETYKPCCAPTQLNMAIS 405

RESULT 151  
US-08-459-129-2  
Sequence 2, Application US/08459129  
Patent No. 6110482  
GENERAL INFORMATION:  
APPLICANT: KHOURI, ROGER K.  
APPLICANT: SAMPATH, KUBER T.  
APPLICANT: RUEGER, DAVID C.  
TITLE OF INVENTION: MANUFACTURE OF AUTOGENOUS REPLACEMENT

TITLE OF INVENTION: BODY PARTS  
NUMBER OF SEQUENCES: 3  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/459,129  
FILING DATE:  
CLASSIFICATION: 424  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY, ROBIN D.  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP-101  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7100  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-459-129-2

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLN1S 20  
|||||

Db 386 INPETHKPCCAPTQNLN1S 405

RESULT 152  
US-09-219-391-4  
Sequence 4, Application US/09219391  
Patent No. 6153583  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: OP3-INDUCED MORPHOGENESIS  
NUMBER OF SEQUENCES: 15  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/219,391  
FILING DATE:

CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/301,200  
FILING DATE: 28-JUL-1997  
ATTORNEY/AGENT INFORMATION:  
NAME: MEYERS, THOMAS C.  
REGISTRATION NUMBER: 36,989  
REFERENCE/DOCKET NUMBER: CRP-076DV2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 4:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-219-391-4

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLN1S 20  
|||||

Db 386 INPETHKPCCAPTQNLN1S 405

RESULT 153  
US-08-469-411-6  
Sequence 6, Application US/08469411  
Patent No. 6190880  
GENERAL INFORMATION:  
APPLICANT: Isreal, David  
Molman, Neil M.  
TITLE OF INVENTION: Recombinant Bone Morphogenetic Protein  
Heterodimers, Compositions and Methods of Use.  
NUMBER OF SEQUENCES: 30  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Legal Affairs, Genetics Institute, Inc.  
STREET: 87 Cambridgepark Drive  
CITY: Cambridge  
STATE: MA  
COUNTRY: USA  
ZIP: 02140-2387  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Tape  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/469,411  
FILING DATE: 06-Jun-1995  
CLASSIFICATION: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: Kapinos, Ellen J.  
REGISTRATION NUMBER: 32,245  
REFERENCE/DOCKET NUMBER: GI-5192B-CON  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-498-8622  
TELEFAX: 617-876-5851  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 6:  
US-08-469-411-6

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCAPTOLNIAIS 20  
Db 386 INPETHPKPCAPTOLNIAIS 405

RESULT 154  
US-09-019-339B-2  
; Sequence 2, Application US/09019339B  
; Patent No. 6281195  
; GENERAL INFORMATION:  
; APPLICANT: RUEGER, David C  
; APPLICANT: TUCKER, Marjorie M  
; TITLE OF INVENTION: MATRIX-FREE OSTEOGENIC DEVICES, IMPLANTS AND  
; NUMBER OF SEQUENCES: 8  
; CORRESPONDENCE ADDRESSES:  
; ADDRESSEE: James F. Haley, Jr., Esq. c/o FISH & NEAVE  
; STREET: 1251 Avenue of the Americas  
; CITY: New York  
; STATE: New York  
; COUNTRY: United States of America  
; ZIP: 10020  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/019,339B  
; FILING DATE: February 5, 1998  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER:  
; FILING DATE:  
; CLASSIFICATION:  
; ATTORNEY/AGENT INFORMATION:  
; NAME: James F. Haley, Jr., Esq.  
; REGISTRATION NUMBER: 27,794  
; REFERENCE/DOCKET NUMBER: CRP-147  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (212)596-9000  
; TELEFAX: (212)596-9090  
; INFORMATION FOR SEQ ID NO: 2:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 431 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-09-019-339B-2

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCAPTOLNIAIS 20  
Db 386 INPETHPKPCAPTOLNIAIS 405

RESULT 155  
US-09-170-936-17  
; Sequence 17, Application US/09170936  
; Patent No. 6333312  
; GENERAL INFORMATION:  
; APPLICANT: KUBERASAMPATH, THANGAVEL  
; APPLICANT: COHEN, CHARLES M.  
; APPLICANT: OPPERMAN, HERMANN  
; APPLICANT: OZKAYNAK, ENGIN  
; APPLICANT: RUEGER, DAVID C.  
; APPLICANT: PANG, ROY H. L.  
; APPLICANT: SMART, JOHN E.  
; TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR

; TITLE OF INVENTION: INCREASE BONE MASS IN METABOLIC BONE DISEASES  
; NUMBER OF SEQUENCES: 33  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
; STREET: 45 SOUTH STREET  
; CITY: HOPKINTON  
; STATE: MA  
; COUNTRY: USA  
; ZIP: 01748  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patentin Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/170,936  
; FILING DATE:  
; CLASSIFICATION: 514  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 08/432,883  
; FILING DATE: 2-MAY-1995  
; ATTORNEY/AGENT INFORMATION:  
; NAME: FENTON Esq., GILLIAN M.  
; REGISTRATION NUMBER: 36,508  
; REFERENCE/DOCKET NUMBER: CRP-060CPFWC  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (617) 248-7560  
; TELEFAX: (617) 248-7100  
; INFORMATION FOR SEQ ID NO: 17:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 431 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-09-170-936-17

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCAPTOLNIAIS 20  
Db 386 INPETHPKPCAPTOLNIAIS 405

RESULT 156  
US-08-402-542-2  
; Sequence 2, Application US/08402542  
; Patent No. 6395683  
; GENERAL INFORMATION:  
; APPLICANT: JONES, WILLIAM K  
; APPLICANT: TUCKER, RONALD F  
; APPLICANT: RUEGER, DAVID C  
; APPLICANT: OPPERMAN, HERMANN  
; APPLICANT: OZKAYNAK, ENGIN  
; APPLICANT: KUBERASAMPATH, THANGAVEL  
; TITLE OF INVENTION: NOVEL MORPHOGENIC PROTEIN COMPOSITIONS  
; NUMBER OF SEQUENCES: 23  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: PATENT ADMINISTRATOR/CREATIVE BIOMOLECULES,  
; STREET: 35 SOUTH STREET  
; CITY: HOPKINTON  
; STATE: MA  
; COUNTRY: USA  
; ZIP: 01748  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patentin Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/402,542  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/040,510  
FILING DATE:  
APPLICATION NUMBER: US/08/029,335  
FILING DATE: 04-MAR-1993  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/07/971,091  
FILING DATE: 03-NOV-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/07/946,235  
FILING DATE: 16-SEP-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/07/938,336  
FILING DATE: 08-AUG-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/07/923,780  
FILING DATE: 31-JUL-1992  
ATTORNEY/AGENT INFORMATION:  
NAME: FITCHER, EDWARD R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-081CP  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-402-542-2

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQNLNLS 20  
Db 386 INPETHKPCCAPTQNLNLS 405

RESULT 157  
US-08-461-113-17  
Sequence 17, Application US/08461113  
Patent No. 6399569  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: CHARETTE, MARC F.  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: OKAYNAK, ENGIN  
APPLICANT: SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING  
TITLE OF INVENTION: PROLIFERATION OF EPITHELIAL CELLS.  
NUMBER OF SEQUENCES: 3  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/461,113  
FILING DATE:  
CLASSIFICATION: 514

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/445,882  
FILING DATE: 22-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON ESQ., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-074DV  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-461-113-17

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQNLNLS 20  
Db 386 INPETHKPCCAPTQNLNLS 405

RESULT 158  
US-08-828-281B-5  
Sequence 5, Application US/08828281B  
Patent No. 6407060  
GENERAL INFORMATION:  
APPLICANT: CHARETTE, MARC F.  
APPLICANT: FINKLESTEIN, Seth P.  
TITLE OF INVENTION: METHODS FOR ENHANCING FUNCTIONAL  
TITLE OF INVENTION: RECOVERY FOLLOWING CENTRAL NERVOUS SYSTEM ISCHEMIA OR  
TITLE OF INVENTION: TRAUMA  
NUMBER OF SEQUENCES: 9  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/828,281B  
FILING DATE:  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON, GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-069CP  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-828-281B-5

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;



Tue Oct 26 09:17:06 2004

us-10-619-910-11.oct24.ra1

Page 67

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 159  
US-09-887-901-2

Sequence 2, Application US/09887901  
Patent No. 6426332

GENERAL INFORMATION:

APPLICANT: RUEGER, David C

TUCKER, Marjorie M

TITLE OF INVENTION: METHODS OF USE THEREOF

NUMBER OF SEQUENCES: 8

CORRESPONDENCE ADDRESSES:

ADDRESSEE: James F. Haley, Jr., Esq. c/o FISH & NEAVE  
STREET: 1251 Avenue of the Americas  
CITY: New York  
STATE: New York  
COUNTRY: United States of America  
ZIP: 10020

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/887,901

FILING DATE: 22-Jun-2001

CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 09/019,339

FILING DATE: <Unknown>

ATTORNEY/AGENT INFORMATION:

NAME: James F. Haley, Jr., Esq.  
REGISTRATION NUMBER: 27,794

REFERENCE/DOCKET NUMBER: CRP-147

TELECOMMUNICATION INFORMATION:

TELEPHONE: (212)596-9000

TELEFAX: (212)596-9030

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 431 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 2:

Query Match 100.0%; Score 111; DB 4; Length 431;

Best Local Similarity 100.0%; Pred. No. 2.3e-07;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 160  
US-08-456-033-17

Sequence 17, Application US/08456033

GENERAL INFORMATION:

APPLICANT: RUEGER, David C.

APPLICANT: KUBERASAMPATH, THANGAVEL

APPLICANT: OPPERMAN, HERMANN

APPLICANT: OZKAYNAK, ENGIN

APPLICANT: PANG, ROY H.L.

APPLICANT: COHEN, CHARLES M.

TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
REPAIR.

NUMBER OF SEQUENCES: 33

CORRESPONDENCE ADDRESS:

ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES

STREET: 45 SOUTH STREET

CITY: HOPKINTON

STATE: MA

COUNTRY: USA

ZIP: 01748

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/456,033

FILING DATE: 31-MAY-1995

CLASSIFICATION: 514

ATTORNEY/AGENT INFORMATION:

NAME: FENTON Esq., GILLIAN M.

REGISTRATION NUMBER: 36,508

REFERENCE/DOCKET NUMBER: CRP-070DV

TELECOMMUNICATION INFORMATION:

TELEPHONE: (508) 435-9001

TELEFAX: (508) 435-6951

INFORMATION FOR SEQ ID NO: 17:

SEQUENCE CHARACTERISTICS:

LENGTH: 431 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

US-08-456-033-17

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 161  
US-08-643-321-16

Sequence 16, Application US/08643321

Patent No. 6498142

GENERAL INFORMATION:

APPLICANT: SAMPATH, KUBER T.

APPLICANT: COHEN, CHARLES M.

TITLE OF INVENTION: MORPHOGEN TREATMENT FOR CHRONIC

NUMBER OF SEQUENCES: 31

CORRESPONDENCE ADDRESS:

ADDRESSEE: TESTA, KURWITZ & THIBEAULT, LLP

STREET: 125 HIGH STREET

CITY: BOSTON

STATE: MA

COUNTRY: USA

ZIP: 02110

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/643,321

FILING DATE:

CLASSIFICATION: 514

ATTORNEY/AGENT INFORMATION:

NAME: TWOMEY, MICHAEL J

REGISTRATION NUMBER: 38,349

REFERENCE/DOCKET NUMBER: CRP-118

TELECOMMUNICATION INFORMATION:

TELEPHONE: 617/248-7000

TELEFAX: 617/248-7100

INFORMATION FOR SEQ ID NO: 16:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-643-321-16

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 162  
US-08-938-622-2  
Sequence 2, Application US/08938622  
Patent No. 6506729  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: SAMPATH, KUBER T.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR THE  
TREATMENT AND PREVENTION OF PARKINSON'S DISEASE  
NUMBER OF SEQUENCES: 9  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, TESTA, HURWITZ &  
THIBEAULT, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC COMPATIBLE  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/938,622  
FILING DATE:  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: MEYERS, THOMAS C.  
REGISTRATION NUMBER: 36,989  
REFERENCE/DOCKET NUMBER: CRP-128  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7013  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-938-622-2

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 163  
US-09-148-925C-2

Sequence 2, Application US/09148925C  
Patent No. 6551995  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
OZKANAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC COMPATIBLE  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/148,925C  
FILING DATE: 04-SEP-1998  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 09/148,925  
FILING DATE: 8-SEP-1998  
APPLICATION NUMBER: US 08/449,699  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: DIANA M. STEEL  
REGISTRATION NUMBER: 43,153  
REFERENCE/DOCKET NUMBER: STR-001CP6C3

TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
OTHER INFORMATION: /Product=Opl-pp  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-09-148-925C-2

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQNAIS 20  
DB 386 INPETYKPCCAPTQNAIS 405

RESULT 164  
US-08-957-425-2  
Sequence 2, Application US/08957425  
Patent No. 6586388  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
OZKANAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HUMWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/957,425  
FILING DATE: 24-OCT-1997  
CLASSIFICATION: <unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JUN-1992  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 600,024  
FILING DATE: 16-OCT-1990  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
APPLICATION NUMBER: US 569,920

FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CF6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-08-957-425-2

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQNAIS 20  
DB 386 INPETYKPCCAPTQNAIS 405

RESULT 165  
US-09-780-601A-6  
Sequence 6, Application US/09780601A  
Patent No. 653109  
GENERAL INFORMATION:  
APPLICANT: Israel, David  
TITLE OF INVENTION: Recombinant Bone Morphogenetic Protein  
NUMBER OF SEQUENCES: 30  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Legal Affairs, Genetics Institute, Inc.  
STREET: 87 Cambridgepark Drive  
CITY: Cambridge  
STATE: MA  
COUNTRY: USA  
ZIP: 02140-2387  
COMPUTER READABLE FORM:  
MEDIUM TYPE: tape  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/780,601A  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/469,411  
FILING DATE: 06-JUN-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: Karinos, Ellen J.  
REGISTRATION NUMBER: 32,245  
REFERENCE/DOCKET NUMBER: GI-5192B-CON  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-876-8622  
TELEFAX: 617-876-5851  
INFORMATION FOR SEQ ID NO: 6:

SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-780-601A-6

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLN1S 20  
Db 386 INPETHKPCCAPTOLN1S 405

RESULT 166  
US-08-448-371A-10  
Sequence 10, Application US/08448371A  
Patent No. 6632618

GENERAL INFORMATION:  
APPLICANT: TEN DUKE, Peter  
APPLICANT: HELDIN, Carl-Henrik  
APPLICANT: MIYAZONO, Kohel  
TITLE OF INVENTION: Morphogenic Protein-Specific Cell  
TITLE OF INVENTION: Surface Receptors and Uses Therefor  
NUMBER OF SEQUENCES: 18  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Testa, Hurwitz & Thibault  
STREET: 125 High St.  
CITY: Boston  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentln Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/448,371A  
FILING DATE:  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: MEYERS, Thomas C.  
REGISTRATION NUMBER: 36,989  
REFERENCE/DOCKET NUMBER: CRP-097CPI  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 10:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-448-371A-10

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLN1S 20  
Db 386 INPETHKPCCAPTOLN1S 405

RESULT 167  
US-09-374-958C-39  
Sequence 39, Application US/09374958C  
Patent No. 6677432  
GENERAL INFORMATION:

APPLICANT: Stryker Corporation  
TITLE OF INVENTION: Modified Proteins and DNAs of the TGF-beta Superfamily, including  
TITLE OF INVENTION: Modified Morphogenic Proteins  
FILE REFERENCE: STX-076  
CURRENT APPLICATION NUMBER: US/09/374,958C  
CURRENT FILING DATE: 1999-08-16  
NUMBER OF SEQ ID NOS: 90  
SOFTWARE: Patentln version 2.0  
SEQ ID NO 39  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
FEATURE:  
OTHER INFORMATION: Morphogenic protein OPI  
US-09-374-958C-39

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLN1S 20  
Db 386 INPETHKPCCAPTOLN1S 405

RESULT 168  
US-09-672-224A-2  
Sequence 2, Application US/09672224A  
Patent No. 6696410  
GENERAL INFORMATION:  
APPLICANT: LEE, JOHN C.  
APPLICANT: YEH, LEE-CHUAN C.  
TITLE OF INVENTION: COMPOSITIONS AND THERAPEUTIC METHODS USING MORPHOGENIC  
TITLE OF INVENTION: PROTEINS, HORMONES AND HORMONE RECEPTORS  
FILE REFERENCE: STX-4  
CURRENT APPLICATION NUMBER: US/09/672,224A  
CURRENT FILING DATE: 2000-09-27  
PRIOR APPLICATION NUMBER: 60/156,261  
PRIOR FILING DATE: 1999-09-27  
NUMBER OF SEQ ID NOS: 14  
SOFTWARE: Patentln Ver. 2.1  
SEQ ID NO 2  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-672-224A-2

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLN1S 20  
Db 386 INPETHKPCCAPTOLN1S 405

RESULT 169  
US-08-937-755-2  
Sequence 2, Application US/08937755  
Patent No. 6723698  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: RUEGER, KUBER T.  
APPLICANT: OPPERMANN, HERMANN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR THE  
TITLE OF INVENTION: TREATMENT OF MOTOR NEURON INJURY AND NEUROPATHY  
NUMBER OF SEQUENCES: 9  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, TESTA, HURWITZ &  
STREET: 125 HIGH STREET

CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/937,755  
FILING DATE:  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: MEYERS, THOMAS C.  
REGISTRATION NUMBER: 36,989  
REFERENCE/DOCKET NUMBER: CRP-155  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7100  
TELEFAX: (617) 248-7103  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-937-755-2

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
DB 386 INPETHKPCCAPTQLNALS 405

RESULT 170  
PCT-US90-07654-4  
Sequence 4, Application PC/TUS9007654  
GENERAL INFORMATION:  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 4  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US90/07654  
FILING DATE: 19901228  
CLASSIFICATION: 156  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, ESQ. EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001PS  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 627/248-7100  
INFORMATION FOR SEQ ID NO: 4:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids

TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
PCT-US90-07654-4

Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
DB 386 INPETHKPCCAPTQLNALS 405

RESULT 171  
PCT-US91-07635-2  
Sequence 2, Application PC/TUS9107635  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: RUEGER, DAVID C  
APPLICANT: KUBERASAMPATH, THANGAVEL  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 9  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US91/07635  
FILING DATE: 19911018  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, ESQ. EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-056PC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
PCT-US91-07635-2

Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
DB 386 INPETHKPCCAPTQLNALS 405

RESULT 172  
PCT-US92-01968-17  
Sequence 17, Application PC/TUS9201968  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: PANG, ROY HL  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: RUEGER, DAVID C

TITLE OF INVENTION: PROTEIN-INDUCED MORPHOGENESIS  
NUMBER OF SEQUENCES: 23  
CORRESPONDENCE ADDRESS:  
ADDRESS: TESTA HURWITZ & THIBEAULT  
STREET: EXCHANGE PLACE 53 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US92/01968  
FILING DATE: 19920311  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 667,274  
FILING DATE: 11-MAR-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 752,764  
FILING DATE: 30-AUG-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-052PC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
PCT-US92-01968-17

Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQNAIS 20  
Db 386 INPETHKPCCAPTQNAIS 405

RESULT 173  
PCT-US93-05446-2  
Sequence 2, Application PC/TUS9305446  
GENERAL INFORMATION:  
APPLICANT:  
TITLE OF INVENTION: PROSTHETIC DEVICES HAVING ENHANCED  
TITLE OF INVENTION: OSTEOGENIC PROPERTIES  
NUMBER OF SEQUENCES: 22  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Creative Biomolecules, Inc.  
STREET: 35 South Street  
CITY: Hopkinton  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US93/05446  
FILING DATE: 19930608  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ, EDMUND R

REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: STK-057  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
PCT-US93-05446-2

Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQNAIS 20  
Db 386 INPETHKPCCAPTQNAIS 405

RESULT 174  
PCT-US93-07189-2  
Sequence 2, Application PC/TUS9307189  
GENERAL INFORMATION:  
APPLICANT:  
TITLE OF INVENTION: NOVEL MORPHOGENIC PROTEIN COMPOSITIONS  
TITLE OF INVENTION: OF MATTER  
NUMBER OF SEQUENCES: 23  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR/CREATIVE BIOMOLECULES,  
INC.  
STREET: 35 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US93/07189  
FILING DATE: 19930729  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY, ROBIN D.  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP-081CP  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
PCT-US93-07189-2

Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQNAIS 20  
Db 386 INPETHKPCCAPTQNAIS 405

RESULT 175  
PCT-US93-07190-17  
Sequence 17, Application PC/TUS9307190

```

GENERAL INFORMATION:
APPLICANT:
TITLE OF INVENTION: MORPHOGEN-ENRICHED DIETARY COMPOSITION
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
ADDRESSEE: CREATIVE BIOMOLECULES, INC.
STREET: 35 SOUTH STREET
CITY: HOPKINTON
STATE: MA
COUNTRY: USA
ZIP: 01748
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/07190
ATTORNEY/AGENT INFORMATION:
NAME: KELLEY, ROBIN D
REGISTRATION NUMBER: 34,637
REFERENCE/DOCKET NUMBER: CRP-071
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617/248-7100
TELEFAX: 617/248-7100
INFORMATION FOR SEQ ID NO: 17:
SEQUENCE CHARACTERISTICS:
LENGTH: 431 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
PCT-US93-07190-17

Query Match          100.0%; Score 111; DB 5; Length 431;
Best Local Similarity 100.0%; Pred. No. 2.3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPETHPKPCCAPTQLNALS 20
Db 386 INPETHPKPCCAPTQLNALS 405

RESULT 176
PCT-US93-07231-17
Sequence 17, Application PC/TUS9307231
GENERAL INFORMATION:
APPLICANT:
TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND
REPAIR
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
ADDRESSEE: CREATIVE BIOMOLECULES, INC.
STREET: 35 SOUTH STREET
CITY: HOPKINTON
STATE: MASSACHUSETTS
COUNTRY: USA
ZIP: 01748
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/07231
FILING DATE: 19930729
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: KELLEY, ROBIN D
REGISTRATION NUMBER: 34,637
REFERENCE/DOCKET NUMBER: CRP-070
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617/248-7000
TELEFAX: 617/248-7100
```

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INFORMATION FOR SEQ ID NO: 17:
SEQUENCE CHARACTERISTICS:
LENGTH: 431 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
PCT-US93-07231-17

Query Match          100.0%; Score 111; DB 5; Length 431;
Best Local Similarity 100.0%; Pred. No. 2.3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPETHPKPCCAPTQLNALS 20
Db 386 INPETHPKPCCAPTQLNALS 405

RESULT 177
PCT-US93-08742-17
Sequence 17, Application PC/TUS9308742
GENERAL INFORMATION:
APPLICANT:
TITLE OF INVENTION: MORPHOGEN-INDUCED PERIODONTAL TISSUE REGENERATION
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
ADDRESSEE: CREATIVE BIOMOLECULES, INC.
STREET: 45 SOUTH STREET
CITY: HOPKINTON
STATE: MA
COUNTRY: USA
ZIP: 01748
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/08742
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
ATTORNEY/AGENT INFORMATION:
NAME: KELLEY ESO, ROBIN D.
REGISTRATION NUMBER: 34,637
REFERENCE/DOCKET NUMBER: CRP-067
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617/248-7477
TELEFAX: 617/248-7100
INFORMATION FOR SEQ ID NO: 17:
SEQUENCE CHARACTERISTICS:
LENGTH: 431 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
PCT-US93-08742-17

Query Match          100.0%; Score 111; DB 5; Length 431;
Best Local Similarity 100.0%; Pred. No. 2.3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPETHPKPCCAPTQLNALS 20
Db 386 INPETHPKPCCAPTQLNALS 405

RESULT 178
PCT-US93-08808-17
Sequence 17, Application PC/TUS9308808
GENERAL INFORMATION:
APPLICANT:
TITLE OF INVENTION: MORPHOGEN-INDUCED LIVER REGENERATION
```

NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC.  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US93/08808  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY ESO, ROBIN D.  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP-072  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7477  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
PCT-US93-08808-17

Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPETHKPCCAPTQNLNALS 20  
Db 386 INPETHKPCCAPTQNLNALS 405

RESULT 179  
PCT-US93-08885-17  
Sequence 17 Application PC/TUS9308885  
GENERAL INFORMATION:  
APPLICANT:  
TITLE OF INVENTION: MORPHOGEN TREATMENT OF GASTROINTESTINAL  
TITLE OF INVENTION: UICERS  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC.  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US93/08885  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY ESO, ROBIN D.

REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP-074  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7477  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
PCT-US93-08885-17

Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPETHKPCCAPTQNLNALS 20  
Db 386 INPETHKPCCAPTQNLNALS 405

RESULT 180  
PCT-US93-10520-4  
Sequence 4 Application PC/TUS9310520  
GENERAL INFORMATION:  
APPLICANT:  
TITLE OF INVENTION: OP3-INDUCED MORPHOGENESIS  
NUMBER OF SEQUENCES: 13  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC.  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US93/10520  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/753,059  
FILING DATE: 30-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/752,857  
FILING DATE: 30-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/923,780  
FILING DATE: 31-JUL-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/922,813  
FILING DATE: 31-JUL-1992  
ATTORNEY/AGENT INFORMATION:  
NAME: FITCHER ESO, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-076PC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508)435-9001  
INFORMATION FOR SEQ ID NO: 4:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid



Tue Oct 26 09:17:06 2004

us-10-619-910-11.oct24.ra1

Page 75

TOPOLOGY: linear  
MOLECULE TYPE: protein  
PCT-US93-10520-4

Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLN1S 20  
Db 386 INPETHKPCCAPTOLN1S 405

RESULT 181  
PCT-US95-05467-10  
Sequence 10, Application PC/TUS9505467  
GENERAL INFORMATION:  
APPLICANT:  
TITLE OF INVENTION: MORPHOGENIC PROTEIN-SPECIFIC CELL  
TITLE OF INVENTION: SURFACE RECEPTORS AND USES THEREFOR  
NUMBER OF SEQUENCES: 15  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, TESTA, HURWITZ &  
ADDRESSEE: THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US95/05467  
FILING DATE:  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-097PC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 10:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
PCT-US95-05467-10

Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLN1S 20  
Db 386 INPETHKPCCAPTOLN1S 405

RESULT 182  
PCT-US95-06724-2  
Sequence 2, Application PC/TUS9506724  
GENERAL INFORMATION:  
APPLICANT:  
TITLE OF INVENTION: MANUFACTURE OF AUTOGENOUS REPLACEMENT  
TITLE OF INVENTION: BODY PARTS  
NUMBER OF SEQUENCES: 3  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, TESTA, HURWITZ &

ADDRESSEE: THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US95/06724  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY, ROBIN D.  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP101PC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
PCT-US95-06724-2

Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLN1S 20  
Db 386 INPETHKPCCAPTOLN1S 405

RESULT 183  
US-08-411-607A-3  
Sequence 3, Application US/08411607A  
Patent No. 5994102  
GENERAL INFORMATION:  
APPLICANT: HUDSON, PETER L.  
APPLICANT: ROSEN, CRAIG A.  
APPLICANT: HE, WEI WU  
TITLE OF INVENTION: PROSTATIC GROWTH FACTOR  
NUMBER OF SEQUENCES: 10  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILLAN, CECCHI,  
ADDRESSEE: STEWART & OLSTEIN  
STREET: 6 BECKER FARM ROAD  
CITY: ROSELAND  
STATE: NJ  
COUNTRY: US  
ZIP: 07068  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/411,607A  
FILING DATE: 11-APR-1995  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: FERRARO, GREGORY D.  
REGISTRATION NUMBER: 36,134  
REFERENCE/DOCKET NUMBER: 325800-329

TELECOMMUNICATION INFORMATION:  
TELEPHONE: (201) 994-1700  
TELEFAX: (201) 994-1744  
INFORMATION FOR SEQ ID NO: 3:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 432 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-411-607A-3

Query Match 100.0%; Score 111; DB 2; Length 432;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOINAI 20  
DB 387 INPETHKPCCAPTOINAI 406

RESULT 184  
US-09-361-741-3  
Sequence 3, Application US/09361741  
Patent No. 6500638  
GENERAL INFORMATION:  
APPLICANT: HUDSON, PETER L  
APPLICANT: ROSEN, CRAIG A  
APPLICANT: HE, WEI WU  
TITLE OF INVENTION: PROSTATIC GROWTH FACTOR  
NUMBER OF SEQUENCES: 10  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILLAN, CECCHI,  
ADDRESSEE: STEWART & OLSTEIN  
STREET: 6 BECKER FARM ROAD  
CITY: ROSELAND  
STATE: NJ  
COUNTRY: US  
ZIP: 07068  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/361,741  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/411,607  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: FERRARO, GREGORY D  
REGISTRATION NUMBER: 36,134  
REFERENCE/DOCKET NUMBER: 325800-329  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (201) 994-1700  
TELEFAX: (201) 994-1744  
INFORMATION FOR SEQ ID NO: 3:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 432 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-361-741-3

Query Match 100.0%; Score 111; DB 4; Length 432;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOINAI 20  
DB 387 INPETHKPCCAPTOINAI 406

DB 387 INPETHKPCCAPTOINAI 406

RESULT 185  
US-09-461-418-3  
Sequence 3, Application US/09461418  
Patent No. 6521227  
GENERAL INFORMATION:  
APPLICANT: HUDSON, PETER L  
APPLICANT: ROSEN, CRAIG A  
APPLICANT: HE, WEI WU  
TITLE OF INVENTION: PROSTATIC GROWTH FACTOR  
NUMBER OF SEQUENCES: 10  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILLAN, CECCHI,  
ADDRESSEE: STEWART & OLSTEIN  
STREET: 6 BECKER FARM ROAD  
CITY: ROSELAND  
STATE: NJ  
COUNTRY: US  
ZIP: 07068  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/461,418  
FILING DATE: 16-Dec-1999  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/411,607A  
FILING DATE: 11-APR-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FERRARO, GREGORY D  
REGISTRATION NUMBER: 36,134  
REFERENCE/DOCKET NUMBER: 325800-329  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (201) 994-1700  
TELEFAX: (201) 994-1744  
INFORMATION FOR SEQ ID NO: 3:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 432 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 3:  
US-09-461-418-3

Query Match 100.0%; Score 111; DB 4; Length 432;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOINAI 20  
DB 387 INPETHKPCCAPTOINAI 406

RESULT 186  
US-07-841-646-13  
Sequence 13, Application US/07841646  
Patent No. 5266683  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HORWITZ & THIBEAULT

STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/841,646  
FILING DATE: 19920221  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CIP-001CIB6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 484 amino acids  
TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-07-841-646-13

Query Match 100.0%; Score 111; DB 1; Length 484;  
Best Local Similarity 100.0%; Pred. No. 2,6e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHPCCAPTQLNIS 20  
DB 439 INPETHPCCAPTQLNIS 458  
RESULT 187  
US-08-147-023-13  
; Sequence 13, Application US/08147023  
; Patent No. 5468845  
; GENERAL INFORMATION:  
; APPLICANT: OPPERMAN, HERMANN  
; APPLICANT: OZKAYNAK, ENGIN  
; APPLICANT: KUBERASAPATHI, THANGAVEL  
; APPLICANT: RUEGER, DAVID C.  
; APPLICANT: PANG, ROY H.L.  
; TITLE OF INVENTION: OSTEOGENIC DEVICES  
; NUMBER OF SEQUENCES: 33  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: TESTA, HIRWITZ & THIBEAULT  
; STREET: 53 STATE STREET  
; CITY: BOSTON  
; STATE: MASSACHUSETTS  
; COUNTRY: U.S.A.  
; ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/147,023  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613

FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 484 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-147-023-13

Query Match 100.0%; Score 111; DB 1; Length 484;  
Best Local Similarity 100.0%; Pred. No. 2.6e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
DB 439 INPETHKPCCAPTQLNALS 458

RESULT 188  
US-08-447-570-13  
Sequence 13, Application US/08447570  
Patent No. 5714589  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 536  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988

FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 484 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-447-570-13

Query Match 100.0%; Score 111; DB 1; Length 484;  
Best Local Similarity 100.0%; Pred. No. 2.6e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
DB 439 INPETHKPCCAPTQLNALS 458

RESULT 189  
US-08-449-700-13  
Sequence 13, Application US/08449700  
Patent No. 5863758  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET

Tue Oct 26 09:17:06 2004

us-10-619-910-11.oct24.rai

Page 79

CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/449,700  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CB6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 484 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-449-700-13

Query Match 100.0%; Score 111; DB 2; Length 484;  
Best Local Similarity 100.0%; Pred. No. 2.6e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Qy 1 INPETYKPCCAPTQNLNLS 20  
Db 439 INPETYKPCCAPTQNLNLS 458  
RESULT 190  
US-08-449-699A-13  
Sequence 13, Application US/08449699A  
Patent No. 5958441  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OZKAYNAK, ENGİN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
TITLE OF INVENTION: ANTIBODIES TO OSTEOGENIC PROTEINS  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/449,699A  
FILING DATE: 24-MAY-1995  
CLASSIFICATION: 424  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 01-NOV-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: STK-001CB6CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 484 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-449-699A-13  
Query Match 100.0%; Score 111; DB 2; Length 484;  
Best Local Similarity 100.0%; Pred. No. 2.6e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Qy 1 INPETYKPCCAPTQNLNLS 20  
Db 439 INPETYKPCCAPTQNLNLS 458  
RESULT 191  
US-09-148-925C-13  
Sequence 13, Application US/09148925C  
Patent No. 6551995  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OZKAYNAK, ENGİN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.

PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/148,925C  
FILING DATE: 04-Sep-1998  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 09/148,925  
FILING DATE: 8-SEP-1998  
APPLICATION NUMBER: US 08/449,699  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: DIANA M. STEEL  
REGISTRATION NUMBER: 43,153  
REFERENCE/DOCKET NUMBER: STK-001CP6C3  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 484 amino acids  
TYPE: amino acid

TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
OTHER INFORMATION: /product="OPIC"  
SEQUENCE DESCRIPTION: SEQ ID NO: 13:  
US-09-148-925C-13  
Query Match 100.0%; Score 111; DB 4; Length 484;  
Best Local Similarity 100.0%; Pred. No. 2,6e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTQNAIS 20  
DB 439 INPETHKPCCAPTQNAIS 458  
RESULT 192  
US-08-957-425-13  
Sequence 13, Application US/08957425  
Patent No. 6586388  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMAN  
OKATYAK, ENGIN  
KUBERASAPATH, THANAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/957,425  
FILING DATE: 24-Oct-1997  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989

APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: FITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 484 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 13:  
US-08-957-425-13

Query Match 100.0%; Score 111; DB 4; Length 484;  
Best Local Similarity 100.0%; Pred. No. 2.6e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPDTVPKCCAPQOLNALS 20  
Db 439 INPDTVPKCCAPQOLNALS 458

RESULT 193  
US-08-278-729A-6  
Sequence 6, Application US/08278729A  
Patent No. 5650276  
GENERAL INFORMATION:  
APPLICANT: SMART, JOHN  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGENIC PROTEIN SCREENING METHOD  
NUMBER OF SEQUENCES: 33  
CURRENT APPLICATION DATA:  
CORRESPONDENCE ADDRESS:  
ADDRESS: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/278,729A  
FILING DATE: 20-JUL-1994  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: FITCHER Esq., EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-058CPFW  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein

FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "MOP-1 (MATURE FORM)"  
US-08-278-729A-6

Query Match 97.3%; Score 108; DB 1; Length 139;  
Best Local Similarity 95.0%; Pred. No. 1.9e-07;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPDTVPKCCAPQOLNALS 20  
Db 94 INPDTVPKCCAPQOLNALS 113

RESULT 194  
US-08-155-343A-6  
Sequence 6, Application US/08155343A  
Patent No. 5656593  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: MORPHOGENIC-INDUCED PERIODONTAL TISSUE  
REGENERATION.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESS: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/155,343A  
FILING DATE: 15-NOV-1993  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-067FW  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "MOP-1 (MATURE FORM)"  
US-08-155-343A-6

Query Match 97.3%; Score 108; DB 1; Length 139;  
Best Local Similarity 95.0%; Pred. No. 1.9e-07;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPDTVPKCCAPQOLNALS 20  
Db 94 INPDTVPKCCAPQOLNALS 113

RESULT 195  
US-08-406-672-6  
Sequence 6, Application US/08406672  
Patent No. 56744844  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR  
TITLE OF INVENTION: INCREASE BONE MASS IN METABOLIC BONE DISEASES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/406,672  
FILING DATE: 20-MAR-1995  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 752,857  
FILING DATE: 30-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 667,274  
FILING DATE: 11-MAR-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-060CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "MOP-1 (MATURE FORM)"  
US-08-406-672-6  
Query Match 97.3%; Score 108; DB 1; Length 139;  
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Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
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DB 94 INPVTVPKCCAPTQNLNALS 113  
RESULT 196  
US-08-643-563A-6  
Sequence 6, Application US/08643563A  
Patent No. 5707810  
GENERAL INFORMATION:  
APPLICANT: SMART, JOHN  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OZKAYNAK, ENGIN

APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGENIC PROTEIN SCREENING METHOD  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/643,563A  
FILING DATE: 06-MAY-1996  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: TWOMEY Esq., MICHAEL J.  
REGISTRATION NUMBER: 38,349  
REFERENCE/DOCKET NUMBER: CRP-058CN2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "MOP-1 (MATURE FORM)"  
US-08-643-563A-6  
Query Match 97.3%; Score 108; DB 1; Length 139;  
Best Local Similarity 95.0%; Pred. No. 1.9e-07;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
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DB 94 INPVTVPKCCAPTQNLNALS 113  
RESULT 197  
US-08-643-763A-6  
Sequence 6, Application US/08643763A  
Patent No. 5733878  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: MORPHOGENIC-INDUCED PERIODONTAL TISSUE  
REGENERATION.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk



COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/643,763A  
FILING DATE: 06-MAY-1996  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-0676CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "MOP-1 (MATURE FORM)"  
US-08-643-763A-6

Query Match 97.3%; Score 108; DB 1; Length 139;  
Best Local Similarity 95.0%; Pred. No. 1.9e-07;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPVTVPKPCAPQOLNALS 20  
Db 94 INPVTVPKPCAPQOLNALS 113

RESULT 198  
US-08-462-623-6  
Sequence 6, Application US/08462623  
Patent No. 5739107  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: CHARITTE, MARC F.  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT OF GASTROINTESTINAL  
TITLE OF INVENTION: ULCERS.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/462,623  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/445,882  
FILING DATE: 22-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.

REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-074CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "MOP-1 (MATURE FORM)"  
US-08-462-623-6

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Best Local Similarity 95.0%; Pred. No. 1.9e-07;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

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Db 94 INPVTVPKPCAPQOLNALS 113

RESULT 199  
US-08-451-953A-6  
Sequence 6, Application US/08451953A  
Patent No. 5741641  
GENERAL INFORMATION:  
APPLICANT: SMART, JOHN  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGENIC PROTEIN SCREENING METHOD  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/451,953A  
FILING DATE: 26-MAY-1995  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER Esq., EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-058CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein

LOCATION: 1..139  
OTHER INFORMATION: /note= "MOP-1 (MATURE FORM)"  
US-08-451-953A-6

Query Match 97.3%; Score 108; DB 1; Length 139;  
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Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

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Sequence 6, Application US/08445468A  
Patent No. 5849686

GENERAL INFORMATION:

APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGEN-INDUCED LIVER REGENERATION  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:

ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/445,468A  
FILING DATE: 22-MAY-1995

CLASSIFICATION: 514

ATTORNEY/AGENT INFORMATION:

NAME: FENTON Esq., GILLIAN M.

REGISTRATION NUMBER: 36,508

REFERENCE/DOCKET NUMBER: CRP-072FW2

TELECOMMUNICATION INFORMATION:

TELEPHONE: (617) 248-7560

TELEFAX: (617) 248-7100

INFORMATION FOR SEQ ID NO: 6:

SEQUENCE CHARACTERISTICS:

LENGTH: 139 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

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OTHER INFORMATION: /note= "MOP-1 (MATURE FORM)"

US-08-445-468A-6

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Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

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Db 94 INPDTVPKCCAPTQNLNAIS 113

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Job time : 46 secs

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us-10-619-910-11.oct24.rapb

Page 1

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OM protein - protein search, using sw model

Run on: October 26, 2004, 07:43:29 ; Search time 48 Seconds  
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134.899 Million cell updates/sec

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Gapop 10.0 , Gapext 0.5

Searched: 1364641 seqs, 323758627 residues

Total number of hits satisfying chosen parameters: 1364641

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Listing first 200 summaries

Database : Published Applications AA:\*

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Pred. No. is the number of results predicted by chance to have a  
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196	72	64.9	399	14	US-10-122-026-8	Sequence 8, Appl
197	72	64.9	399	14	US-10-050-050-23	Sequence 23, Appl
198	72	64.9	399	14	US-10-350-747-2	Sequence 2, Appl
199	72	64.9	399	14	US-10-321-799-27	Sequence 27, Appl
200	72	64.9	399	15	US-10-428-997A-27	Sequence 27, Appl

## ALIGNMENTS

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RESULT 1
US-10-619-910-11
; Sequence 11, Application US/1061910
; Publication No. US2004005384A1
; GENERAL INFORMATION:
; APPLICANT: Kyocera Corporation
; APPLICANT: Nishimura, Yoshiniko
; APPLICANT: Suzuki, Yoshinaka
; APPLICANT: Tanihara, Masao
; TITLE OF INVENTION: A Peptide and Osteogenic Accelerator
; FILE REFERENCE: 81918-0001
; CURRENT APPLICATION NUMBER: US/10/619, 910
; PRIOR FILING DATE: 2003-07-15
; PRIOR APPLICATION NUMBER: US/09/439, 779B
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: Patent version 3.1
; SEQ ID NO 11
; LENGTH: 20
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION:
US-10-619-910-11
Query Match      100.0%; Score 111; DB 15; Length 20;
Best Local Similarity 100.0%; Pred. No. 7; 8e-08;

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Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTOJNAIS 20  
DB 1 INPETYKPCCAPTOJNAIS 20

## RESULT 2

US-09-754-831A-39

Sequence 39, Application US/09754831A  
Publication No. US20030228345A1  
GENERAL INFORMATION:  
APPLICANT: Oppermann, Herman  
APPLICANT: Kuberassapath, Thangavel  
APPLICANT: Rueger, David  
APPLICANT: Ozkaynak, Engin  
TITLE OF INVENTION: Osteogenic Devices  
FILE REFERENCE: STX-006CN  
CURRENT APPLICATION NUMBER: US/09/754,831A  
CURRENT FILING DATE: 2001-01-03  
PRIOR APPLICATION NUMBER: US 08/375,901  
PRIOR FILING DATE: 1995-01-20  
PRIOR APPLICATION NUMBER: US 08/145,812  
PRIOR FILING DATE: 1993-11-01  
PRIOR APPLICATION NUMBER: US 07/995,345  
PRIOR FILING DATE: 1992-12-22  
PRIOR APPLICATION NUMBER: US 07/315,342  
PRIOR FILING DATE: 1989-02-23  
PRIOR APPLICATION NUMBER: US 07/232,630  
PRIOR FILING DATE: 1988-08-15  
PRIOR APPLICATION NUMBER: US 07/179,406  
PRIOR FILING DATE: 1988-04-08  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.0  
SEQ ID NO 39  
LENGTH: 97  
TYPE: PRT  
ORGANISM: mammalian  
FEATURE:  
OTHER INFORMATION: Opl shorter sequence capable of inducing endochondral bone format  
US-09-754-831A-39

Query Match 100.0%; Score 111; DB 10; Length 97;

Best Local Similarity 100.0%; Pred. No. 3.5e-07;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTOJNAIS 20  
DB 52 INPETYKPCCAPTOJNAIS 71

## RESULT 3

US-09-791-946-1

Sequence 1, Application US/09791946  
Patent No. US20020028453A1  
GENERAL INFORMATION:  
APPLICANT: KECK, PETER  
APPLICANT: GRIFFITH, DIANA L  
APPLICANT: CARLSON, WILLIAM D  
APPLICANT: RUEGER, DAVID C  
APPLICANT: SAMPATH, KUBER T  
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR PRODUCING  
NUMBER OF SEQUENCES: 8  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES,  
INC.  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/791,946

FILING DATE: 22-Feb-2001

CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/786,284

FILING DATE: <Unknown>

ATTORNEY/AGENT INFORMATION:

NAME: PITCHER, EDMUND R

REGISTRATION NUMBER: 27,829

REFERENCE/DOCKET NUMBER: CRP-102

TELECOMMUNICATION INFORMATION:

TELEPHONE: (508) 435-9001

TELEFAX: (508) 435-0992

INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:

LENGTH: 102 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

FEATURE:

NAME/KEY: Protein

LOCATION: 1..102

OTHER INFORMATION: /Product= "hop-1"

SEQUENCE DESCRIPTION: SEQ ID NO: 1:

US-09-791-946-1

QY 1 INPETYKPCCAPTOJNAIS 20  
DB 57 INPETYKPCCAPTOJNAIS 76

## RESULT 4

US-10-187-394-16

Sequence 16, Application US/10187394  
Publication No. US2003017667A1  
GENERAL INFORMATION:  
APPLICANT: KECK, PETER  
APPLICANT: SMART, JOHN  
TITLE OF INVENTION: SINGLE CHAIN ANALOGS OF TGF-B  
NUMBER OF SEQUENCES: 45  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, TESTA, HURWITZ &  
ADDRESS: THIBEAULT, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/187,394  
FILING DATE: 28-JUN-2002  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/09/496,398  
FILING DATE: 02-FEB-2000  
CLASSIFICATION:  
APPLICATION NUMBER: US 08/478,097

FILING DATE: 07-JUN-1995  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESO, EDMUND R  
REGISTRATION NUMBER: 27, 829  
REFERENCE/DOCKET NUMBER: STK-059CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-248-7000  
TELEFAX: 617-248-7100  
INFORMATION FOR SEQ ID NO: 16:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..102  
OTHER INFORMATION: /note="Op-1 SEQUENCE"  
US-10-187-394-16

Query Match 100.0%; Score 111; DB 14; Length 102;  
Best Local Similarity 100.0%; Pred. No. 3.7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCCAPTQLNLAIS 20  
DB 57 INPETHPKPCCAPTQLNLAIS 76

RESULT 5  
US-10-164-279-4  
Sequence 4, Application US/10164279  
Publication No. US20030185792A1  
GENERAL INFORMATION:  
APPLICANT: Keck, P.  
TITLE OF INVENTION: MORPHOGEN ANALOGS OF BOND MORPHOGENIC PROTEINS  
FILE REFERENCE: CIBT-P04-566  
CURRENT APPLICATION NUMBER: US/10/164,279  
CURRENT FILING DATE: 2002-06-06  
PRIOR APPLICATION NUMBER: 09/791946  
PRIOR FILING DATE: 2001-02-22  
NUMBER OF SEQ ID NOS: 64  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 4  
LENGTH: 102  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-164-279-4

Query Match 100.0%; Score 111; DB 14; Length 102;  
Best Local Similarity 100.0%; Pred. No. 3.7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCCAPTQLNLAIS 20  
DB 57 INPETHPKPCCAPTQLNLAIS 76

RESULT 6  
US-09-754-831A-9  
Sequence 9, Application US/09754831A  
Publication No. US20030228345A1  
GENERAL INFORMATION:  
APPLICANT: Oppermann, Herman  
APPLICANT: Koberasampath, Thangavel  
APPLICANT: Rueger, David  
APPLICANT: Ozkaynak, Engin  
TITLE OF INVENTION: Osteogenic Devices  
FILE REFERENCE: STK-008CN  
CURRENT APPLICATION NUMBER: US/09/754,831A  
CURRENT FILING DATE: 2001-01-03

PRIOR APPLICATION NUMBER: US 08/375,901  
PRIOR FILING DATE: 1995-01-20  
PRIOR APPLICATION NUMBER: US 08/145,812  
PRIOR FILING DATE: 1993-11-01  
PRIOR APPLICATION NUMBER: US 07/995,345  
PRIOR FILING DATE: 1992-12-22  
PRIOR APPLICATION NUMBER: US 07/315,342  
PRIOR FILING DATE: 1989-02-23  
PRIOR APPLICATION NUMBER: US 07/232,630  
PRIOR FILING DATE: 1988-08-15  
PRIOR APPLICATION NUMBER: US 07/179,406  
PRIOR FILING DATE: 1988-04-08  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.0  
SEQ ID NO 9  
LENGTH: 107  
TYPE: PRT  
ORGANISM: mammalian  
FEATURE:  
OTHER INFORMATION: Op1 protein sequence with osteogenic activity  
US-09-754-831A-9

Query Match 100.0%; Score 111; DB 10; Length 107;  
Best Local Similarity 100.0%; Pred. No. 3.9e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCCAPTQLNLAIS 20  
DB 62 INPETHPKPCCAPTQLNLAIS 81

RESULT 7  
US-09-813-398-30  
Sequence 30, Application US/09813398  
Patent No. US20020169292A1  
GENERAL INFORMATION:  
APPLICANT: Bruce D. Weintraub  
APPLICANT: Mariusz W. Skrzylinski  
TITLE OF INVENTION: CYSTINE KNOT GROWTH FACTOR MUTANTS  
FILE REFERENCE: USFMD.00301  
CURRENT APPLICATION NUMBER: US/09/813,398  
CURRENT FILING DATE: 2001-03-20  
PRIOR APPLICATION NUMBER: PCT/US99/05908  
PRIOR FILING DATE: 1999-03-15  
PRIOR APPLICATION NUMBER: PCT/US98/19772  
PRIOR FILING DATE: 1998-09-22  
NUMBER OF SEQ ID NOS: 41  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 30  
LENGTH: 112  
TYPE: PRT  
ORGANISM: HOMO SAPIEN  
US-09-813-398-30

Query Match 100.0%; Score 111; DB 9; Length 112;  
Best Local Similarity 100.0%; Pred. No. 4.1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCCAPTQLNLAIS 20  
DB 68 INPETHPKPCCAPTQLNLAIS 87

RESULT 8  
US-09-389-705-12  
Sequence 12, Application US/09389705  
Publication No. US20010018509A1  
GENERAL INFORMATION:  
APPLICANT: JOHNS HOPKINS UNIVERSITY  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3  
NUMBER OF SEQUENCES: 29  
CORRESPONDENCE ADDRESS:

Tue Oct 26 09:17:06 2004

us-10-619-910-11.oct24.rapb

Page 5

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; ADDRESS: SPENSLEY HORN JUBAS & LUBITZ
; STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR
; CITY: LOS ANGELES
; STATE: CALIFORNIA
; COUNTRY: US
; ZIP: 90067
; COMPUTER READABLE FORM:
; MEDIUM TYPE: floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/389,705
; FILING DATE: 03-Sep-1999
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 09/153,733
; FILING DATE: <Unknown>
; ATTORNEY/AGENT INFORMATION:
; NAME: WETHERELL, JR. Ph.D., JOHN R.
; REGISTRATION NUMBER: 31,678
; REFERENCE/DOCKET NUMBER: FD2279 PCT
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (619) 455-5110
; TELEFAX: (619) 455-5110
; INFORMATION FOR SEQ ID NO: 12:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 118 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; IMMEDIATE SOURCE:
; CLONE: OP-1
; FEATURE:
; NAME/KEY: Protein
; LOCATION: 1..118
; SEQUENCE DESCRIPTION: SEQ ID NO: 12:
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; US-09-389-705-12
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; Query Match          100.0%; Score 111; DB 9; Length 118;
; Best Local Similarity 100.0%; Pred. No. 4.3e-07;
; Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
;
; QY 1 INPETHPKPCAPFTQLNALS 20
; DB 73 INPETHPKPCAPFTQLNALS 92
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; RESULT 9
; US-10-115-406-10
; Sequence 10, Application US/10115406
; Publication No. US20020127612A1
; GENERAL INFORMATION:
; APPLICANT: THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE
; APPLICANT: LEE, Se-Jin
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9
; FILE REFERENCE: JHU1190-3
; CURRENT APPLICATION NUMBER: US/10/115,406
; CURRENT FILING DATE: 2002-04-02
; PRIOR APPLICATION NUMBER: 09/301,520
; PRIOR FILING DATE: 1999-04-28
; PRIOR APPLICATION NUMBER: US 09/172,062
; PRIOR FILING DATE: 1998-10-13
; PRIOR APPLICATION NUMBER: US 08/491,835
; PRIOR FILING DATE: 1995-10-23
; PRIOR APPLICATION NUMBER: PCT/US94/00685
; PRIOR FILING DATE: 1994-01-12
; PRIOR APPLICATION NUMBER: US 08/003,303
; PRIOR FILING DATE: 1993-01-12
; NUMBER OF SEQ ID NOS: 28
; SOFTWARE: Patentin version 3.0
; SEQ ID NO 10
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; LENGTH: 118
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-10-115-406-10
;
; Query Match          100.0%; Score 111; DB 13; Length 118;
; Best Local Similarity 100.0%; Pred. No. 4.3e-07;
; Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
;
; QY 1 INPETHPKPCAPFTQLNALS 20
; DB 73 INPETHPKPCAPFTQLNALS 92
;
; RESULT 10
; US-10-154-333-12
; Sequence 12, Application US/10154333
; Publication No. US20030109684A1
; GENERAL INFORMATION:
; APPLICANT: JOHNS HOPKINS UNIVERSITY
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3
; NUMBER OF SEQUENCES: 29
; CORRESPONDENCE ADDRESS:
; ADDRESS: SPENSLEY HORN JUBAS & LUBITZ
; STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR
; CITY: LOS ANGELES
; STATE: CALIFORNIA
; COUNTRY: US
; ZIP: 90067
; COMPUTER READABLE FORM:
; MEDIUM TYPE: floppy disk
; OPERATING SYSTEM: IBM PC compatible
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/154,333
; FILING DATE: 21-May-2002
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/09/389,705
; FILING DATE: 03-Sep-1999
; APPLICATION NUMBER: 09/153,733
; ATTORNEY/AGENT INFORMATION:
; NAME: WETHERELL, JR. Ph.D., JOHN R.
; REGISTRATION NUMBER: 31,678
; REFERENCE/DOCKET NUMBER: FD2279 PCT
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (619) 455-5110
; TELEFAX: (619) 455-5110
; INFORMATION FOR SEQ ID NO: 12:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 118 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; IMMEDIATE SOURCE:
; CLONE: OP-1
; FEATURE:
; NAME/KEY: Protein
; LOCATION: 1..118
; SEQUENCE DESCRIPTION: SEQ ID NO: 12:
;
; US-10-154-333-12
;
; Query Match          100.0%; Score 111; DB 14; Length 118;
; Best Local Similarity 100.0%; Pred. No. 4.3e-07;
; Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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; QY 1 INPETHPKPCAPFTQLNALS 20
; DB 73 INPETHPKPCAPFTQLNALS 92
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RESULT 11
US-10-704-223-10
; Sequence 10, Application US/10704223
; Publication No. US20040152143A1
; GENERAL INFORMATION:
; APPLICANT: THE JOHNS HOPKINS UNIVERSITY
; APPLICANT: LEE, Se-Jin
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9
; FILE REFERENCE: JHU1190-7
; CURRENT APPLICATION NUMBER: US/10/704,223
; CURRENT FILING DATE: 2003-11-07
; PRIOR APPLICATION NUMBER: US 10/115,406
; PRIOR FILING DATE: 2002-04-02
; PRIOR APPLICATION NUMBER: US 09/301,520
; PRIOR FILING DATE: 1999-04-28
; PRIOR APPLICATION NUMBER: US 09/172,062
; PRIOR FILING DATE: 1998-10-13
; PRIOR APPLICATION NUMBER: US 08/491,835
; PRIOR FILING DATE: 1995-10-23
; PRIOR APPLICATION NUMBER: PCT/US94/00685
; PRIOR FILING DATE: 1994-01-12
; PRIOR APPLICATION NUMBER: US 08/003,303
; PRIOR FILING DATE: 1993-01-12
; NUMBER OF SEQ ID NOS: 28
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 10
; LENGTH: 118
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-704-223-10

Query Match      100.0%; Score 111; DB 16; Length 118;
Best Local Similarity 100.0%; Pred. No. 4.3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy 1 INPETHKPCCAPTQLNALS 20
Db 73 INPETHKPCCAPTQLNALS 92

RESULT 12
US-09-813-459-13
; Sequence 13, Application US/09813459
; Patent No. US20020107369A1
; GENERAL INFORMATION:
; APPLICANT: Lee, Se-Jin
; CUMMINGHAM, No. US20020107369A1
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-10
; NUMBER OF SEQUENCES: 26
; CORRESPONDENCE ADDRESS:
; ADDRESS: Spensley Horn Jubas & Lubitz
; STREET: 1860 Century Park East, Suite 500
; CITY: Los Angeles
; STATE: California
; COUNTRY: USA
; ZIP: 90067
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/813,459
; FILING DATE: 20-Mar-2001
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/624,635
; FILING DATE: <Unknown>
; ATTORNEY/AGENT INFORMATION:
; NAME: Wetherell, Jr., Ph.D., John R.,
; REGISTRATION NUMBER: 31,678
; REFERENCE/DOCKET NUMBER: PD-3054
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TELECOMMUNICATION INFORMATION:
; TELEPHONE: (619) 455-5100
; TELEFAX: (619) 455-5110
; INFORMATION FOR SEQ ID NO: 13:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 119 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; IMMEDIATE SOURCE:
; CLONE: OP-1
; FEATURE:
; NAME/KEY: Protein
; LOCATION: 1..119
; SEQUENCE DESCRIPTION: SEQ ID NO: 13:
US-09-813-459-13

Query Match      100.0%; Score 111; DB 9; Length 119;
Best Local Similarity 100.0%; Pred. No. 4.3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy 1 INPETHKPCCAPTQLNALS 20
Db 74 INPETHKPCCAPTQLNALS 93

RESULT 13
US-09-859-211-40
; Sequence 40, Application US/09859211
; Patent No. US20020157125A1
; GENERAL INFORMATION:
; APPLICANT: Lee, Se-Jin
; APPLICANT: McPherson, Alexandra C.
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-8
; FILE REFERENCE: 07265/144001
; CURRENT APPLICATION NUMBER: US/09/859,211
; CURRENT FILING DATE: 2001-05-15
; PRIOR APPLICATION NUMBER: 09/019,070
; PRIOR FILING DATE: 1998-02-05
; PRIOR APPLICATION NUMBER: 08/862,445
; PRIOR FILING DATE: 1997-05-23
; PRIOR APPLICATION NUMBER: 08/847,910
; PRIOR FILING DATE: 1997-04-28
; PRIOR APPLICATION NUMBER: 08/795,071
; PRIOR FILING DATE: 1997-02-05
; PRIOR APPLICATION NUMBER: 08/525,596
; PRIOR FILING DATE: 1995-10-26
; PRIOR APPLICATION NUMBER: PCT/US94/03019
; PRIOR FILING DATE: 1994-03-18
; PRIOR APPLICATION NUMBER: 08/033,923
; PRIOR FILING DATE: 1993-03-19
; NUMBER OF SEQ ID NOS: 51
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 40
; LENGTH: 119
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-859-211-40

Query Match      100.0%; Score 111; DB 9; Length 119;
Best Local Similarity 100.0%; Pred. No. 4.3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy 1 INPETHKPCCAPTQLNALS 20
Db 74 INPETHKPCCAPTQLNALS 93

RESULT 14
US-09-880-708-18
; Sequence 18, Application US/09880708
; Patent No. US20020165361A1
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GENERAL INFORMATION:  
APPLICANT: Lee, Se-Jin  
Huyth, Thanh  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-5  
NUMBER OF SEQUENCES: 28  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: Gray Cary Ware & Freidenrich LLP  
STREET: 4365 Executive Drive, Suite 1600  
CITY: San Diego  
STATE: CA  
COUNTRY: USA  
ZIP: 92121-2189  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: Windows95  
SOFTWARE: FastSeq for Windows Version 2.0  
CURRENT APPLICATION NUMBER: US/09/880,708  
FILING DATE: 12-Jun-2001  
APPLICATION DATA:  
PRIORITY APPLICATION NUMBER: 09/145,060  
FILING DATE: <Unknown>  
APPLICATION NUMBER: 08/003,144  
FILING DATE: 12-JAN-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: Lisa A. Haile, Ph.D.  
REGISTRATION NUMBER: 38,347  
REFERENCE/DOCKET NUMBER: 07265/057002  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 858/677-1456  
TELEFAX: 619/677-1465  
INFORMATION FOR SEQ ID NO: 18:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
SEQUENCE DESCRIPTION: SEQ ID NO: 18:  
US-09-880-708-16  
Query Match 100.0%; Score 111; DB 9; Length 119;  
Best Local Similarity 100.0%; Pred. No. 4.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETYKPCCAPTQLNIAIS 20  
DB 74 INPETYKPCCAPTQLNIAIS 93  
RESULT 15  
US-09-872-856-40  
Sequence 40, Application US/09872856  
Publication No. US20030074660A1  
GENERAL INFORMATION:  
APPLICANT: Johns Hopkins University School of Medicine  
APPLICANT: Lee, Se-Jin  
APPLICANT: McPherson, Alexandra  
TITLE OF INVENTION: Growth Differentiation Factor-8  
FILE REFERENCE: JHU1120-17  
CURRENT APPLICATION NUMBER: US/09/872,856  
FILING DATE: 2001-06-01  
PRIORITY APPLICATION NUMBER: US 09/124,180  
PRIORITY FILING DATE: 1998-07-28  
PRIORITY APPLICATION NUMBER: US 09/019,070  
PRIORITY FILING DATE: 1998-02-05  
PRIORITY APPLICATION NUMBER: US 08/862,445  
PRIORITY FILING DATE: 1997-05-23  
PRIORITY APPLICATION NUMBER: US 08/847,910  
PRIORITY FILING DATE: 1997-04-28  
PRIORITY APPLICATION NUMBER: US 08/795,071

PRIOR FILING DATE: 1997-02-05  
PRIOR APPLICATION NUMBER: US 08/525,596  
PRIOR FILING DATE: 1995-10-25  
PRIOR APPLICATION NUMBER: PCT/US 94/03019  
PRIOR FILING DATE: 1994-03-18  
PRIOR APPLICATION NUMBER: US 08/033,923  
PRIOR FILING DATE: 1995-03-19  
SOFTWARE: Patent in version 3.1  
SEQ ID NO: 40  
LENGTH: 119  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-872-856-40  
Query Match 100.0%; Score 111; DB 10; Length 119;  
Best Local Similarity 100.0%; Pred. No. 4.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETYKPCCAPTQLNIAIS 20  
DB 74 INPETYKPCCAPTQLNIAIS 93  
RESULT 16  
US-10-335-483-22  
Sequence 22, Application US/10335483  
Publication No. US20030120058A1  
GENERAL INFORMATION:  
APPLICANT: Huyth, Thanh  
Lee, Se-Jin  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-8  
NUMBER OF SEQUENCES: 32  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: Fish & Richardson P.C.  
STREET: 4225 Executive Square, Suite 1400  
CITY: La Jolla  
STATE: CA  
COUNTRY: US  
ZIP: 92037  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: Windows95  
SOFTWARE: FastSeq for Windows Version 2.0  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/335,483  
FILING DATE: 31-Dec-2002  
CLASSIFICATION: <Unknown>  
PRIORITY APPLICATION NUMBER: US/09/177,860  
FILING DATE: <Unknown>  
APPLICATION NUMBER: 08/525,596  
FILING DATE: 19-SEP-1995  
APPLICATION NUMBER: PCT/US94/07762  
FILING DATE: 08-JUL-1994  
ATTORNEY/AGENT INFORMATION:  
NAME: Wetherell, Jr., Ph.D., John R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: 07265/075001  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 619-678-5070  
TELEFAX: 619-678-5099  
INFORMATION FOR SEQ ID NO: 22:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein

LOCATION: 1..119  
SEQUENCE DESCRIPTION: SEQ ID NO: 22:  
US-10-335-483-22

Query Match 100.0%; Score 111; DB 14; Length 119;  
Best Local Similarity 100.0%; Pred. No. 4.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPTOLNMS 20  
DB 74 INPETHKPCAPTOLNMS 93

RESULT 17  
US-10-463-973-40  
Sequence 40, Application US/10463973  
Publication No. US20040055027A1  
GENERAL INFORMATION:  
APPLICANT: Johns Hopkins University School of Medicine  
APPLICANT: Lee, Se-Jin  
APPLICANT: McPherson, Alexandra  
TITLE OF INVENTION: Growth Differentiation Factor-8  
FILE REFERENCE: JHU1120-17  
CURRENT FILING DATE: 2003-06-17  
CURRENT APPLICATION NUMBER: US/10/463,973  
PRIOR FILING DATE: 2001-06-01  
PRIOR APPLICATION NUMBER: US/09/872,856  
PRIOR FILING DATE: 1998-07-28  
PRIOR APPLICATION NUMBER: US/09/124,180  
PRIOR FILING DATE: 1998-07-28  
PRIOR APPLICATION NUMBER: US/09/019,070  
PRIOR FILING DATE: 1998-02-05  
PRIOR APPLICATION NUMBER: US/08/862,445  
PRIOR FILING DATE: 1997-05-23  
PRIOR APPLICATION NUMBER: US/08/847,910  
PRIOR FILING DATE: 1997-04-28  
PRIOR APPLICATION NUMBER: US/08/795,071  
PRIOR FILING DATE: 1997-02-05  
PRIOR APPLICATION NUMBER: US/08/525,596  
PRIOR FILING DATE: 1995-10-25  
PRIOR APPLICATION NUMBER: PCT/US 94/03019  
PRIOR FILING DATE: 1994-03-18  
PRIOR APPLICATION NUMBER: US/08/033,923  
PRIOR FILING DATE: 1993-03-19  
NUMBER OF SEQ ID NOS: 53  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 40  
LENGTH: 119  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-463-973-40

Query Match 100.0%; Score 111; DB 15; Length 119;  
Best Local Similarity 100.0%; Pred. No. 4.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPTOLNMS 20  
DB 74 INPETHKPCAPTOLNMS 93

RESULT 18  
US-10-693-536-12  
Sequence 12, Application US/10693536  
Publication No. US20040067556A1  
GENERAL INFORMATION:  
APPLICANT: Lee, Se-Jin  
APPLICANT: Huynh, Thanh  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-6  
NUMBER OF SEQUENCES: 21  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Fish & Richardson  
STREET: 4225 Executive Square, Suite 1400  
CITY: La Jolla

STATE: California  
COUNTRY: USA  
ZIP: 92037

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/693,536

FILING DATE: 23-Oct-2003  
CLASSIFICATION: <Unknown>

## PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/09/619,061  
FILING DATE: 18-Jul-2000

APPLICATION NUMBER: US/09/097,616  
FILING DATE: 15-JUN-1998

APPLICATION NUMBER: US/08/581,529  
FILING DATE: 15-Apr-1996

## ATTORNEY/AGENT INFORMATION:

NAME: Lisa A. Haile, Ph.D.  
REGISTRATION NUMBER: 38,347

REFERENCE/DOCKET NUMBER: 07265/082001  
TELECOMMUNICATION INFORMATION:

TELEPHONE: (619) 678-5070  
TELEFAX: (619) 678-5099

INFORMATION FOR SEQ ID NO: 12:  
SEQUENCE CHARACTERISTICS:

LENGTH: 119 amino acids  
TYPE: amino acid

STRANDEDNESS: single  
TOPOLOGY: linear

MOLECULE TYPE: protein  
IMMEDIATE SOURCE:

CLONE: OP-1  
FEATURE:

NAME/KEY: Protein  
LOCATION: 1..119

SEQUENCE DESCRIPTION: SEQ ID NO: 12:  
US-10-693-536-12

Query Match 100.0%; Score 111; DB 15; Length 119;  
Best Local Similarity 100.0%; Pred. No. 4.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPTOLNMS 20  
DB 74 INPETHKPCAPTOLNMS 93

RESULT 19  
US-10-758-210-12

Sequence 12, Application US/10758210  
Publication No. US20040127696A1

## GENERAL INFORMATION:

APPLICANT: THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE  
APPLICANT: LEE, Se-Jin

APPLICANT: HUYNH, Thanh  
TITLE OF INVENTION: ANTIBODIES BINDING TO GROWTH DIFFERENTIATION FACTOR-7

FILE REFERENCE: JHU1130-2  
CURRENT APPLICATION NUMBER: US/10/758,210

CURRENT FILING DATE: 2004-01-14  
PRIOR APPLICATION NUMBER: US/09/412,791D

PRIOR FILING DATE: 1999-10-05  
PRIOR APPLICATION NUMBER: US/08/581,528

PRIOR FILING DATE: 1996-01-09  
PRIOR APPLICATION NUMBER: PCT/US94/07799

PRIOR FILING DATE: 1994-07-08  
NUMBER OF SEQ ID NOS: 21

SOFTWARE: PatentIn version 3.0  
SEQ ID NO 12

LENGTH: 119  
TYPE: PRT

ORGANISM: Homo sapiens  
US-10-758-210-12

Query Match 100.0%; Score 111; DB 16; Length 119;  
Best Local Similarity 100.0%; Pred. No. 4.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 74 INPETHKPCCAPTOLNAIS 93

## RESULT 20

US-08-260-675-5  
Sequence 5, Application US/08260675  
Publication No. US20030104993A1  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: PANG, ROY HL  
APPLICANT: COHEN, CHARLES M  
TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: TESTA HURWITZ & THIBEAULT  
STREET: 55 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02140  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/260,675  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/126,100  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/07/922,813  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: FITCHER ESQ, EDWARD R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-070  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
ORIGINAL SOURCE:  
ORGANISM: Homo sapiens  
TISSUE TYPE: HIPPOCAMPUS  
FEATURE:  
NAME/KEY: Protein

LOCATION: 1..139  
OTHER INFORMATION: /label= hOPI-MATURE  
US-08-260-675-5

Query Match 100.0%; Score 111; DB 8; Length 139;  
Best Local Similarity 100.0%; Pred. No. 5e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 94 INPETHKPCCAPTOLNAIS 113

## RESULT 21

US-09-882-875A-1  
Sequence 1, Application US/09882875A  
Patent No. US20020151985A1  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, Thangavel  
BERLOWITZ-TARRANT, Lawrence  
TITLE OF INVENTION: SYNTHETIC BONE MATRIX  
NUMBER OF SEQUENCES: 1  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: Patent Administrator, Testa, Hurwitz &  
Thibault, LLP  
STREET: 125 High St.  
CITY: Boston  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/882,875A  
FILING DATE: 15-Jun-2001  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 09/104,865  
FILING DATE: 25-JUN-1998  
APPLICATION NUMBER: US 08/443,676  
FILING DATE: 18-MAY-1995  
APPLICATION NUMBER: US 07/529,852  
FILING DATE: 29-MAY-1990  
ATTORNEY/AGENT INFORMATION:  
NAME: VITO, Christine C  
REGISTRATION NUMBER: 39,061  
REFERENCE/DOCKET NUMBER: STK-049CN2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 1:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: <Unknown>  
TOPOLOGY: linear  
MOLECULE TYPE: peptide  
SEQUENCE DESCRIPTION: SEQ ID NO: 1:  
US-09-882-875A-1

Query Match 100.0%; Score 111; DB 9; Length 139;  
Best Local Similarity 100.0%; Pred. No. 5e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 94 INPETHKPCCAPTOLNAIS 113

## RESULT 22

US-09-952-318A-5  
; Sequence 5, Application US/09952318A  
; Publication No. US20030224979A1  
; GENERAL INFORMATION:  
; APPLICANT: Kuberampath et al.  
; TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR INCREASE BONE MASS IN  
; TITLE OF INVENTION: METABOLIC BONE DISEASE  
; FILE REFERENCE: JJC-P06-522  
; CURRENT APPLICATION NUMBER: US/09/952,318A  
; CURRENT FILING DATE: 2001-09-13  
; PRIOR APPLICATION NUMBER: 09/1170,936  
; PRIOR FILING DATE: 1998-10-13  
; PRIOR APPLICATION NUMBER: 08/432,983  
; PRIOR FILING DATE: 1995-05-02  
; PRIOR APPLICATION NUMBER: 08/115,914  
; PRIOR FILING DATE: 1993-09-01  
; PRIOR APPLICATION NUMBER: 07/923,780  
; PRIOR FILING DATE: 1992-07-31  
; PRIOR APPLICATION NUMBER: 07/752,847  
; PRIOR FILING DATE: 1991-08-30  
; PRIOR APPLICATION NUMBER: 07/667,274  
; PRIOR FILING DATE: 1991-03-11  
; NUMBER OF SEQ ID NOS: 33  
; SOFTWARE: Patentin version 3.1  
; SEQ ID NO 5  
; LENGTH: 139  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-952-318A-5

Query Match 100.0%; Score 111; DB 10; Length 139;  
Best Local Similarity 100.0%; Pred. No. 5e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQLNIS 20  
Db 94 INPETHKPCCAPTQLNIS 113

RESULT 23  
US-10-050-050-5  
; Sequence 5, Application US/10050050  
; Publication No. US20030125230A1  
; GENERAL INFORMATION:  
; APPLICANT: COHEN, CHARLES M.  
; CHARETTE, MARC F.  
; KUBERASAMPATH, THANGAVEL  
; RUEGER, DAVID C.  
; OPPERMAN, HERMANN  
; PANG, ROY H.L.  
; OKAYNAK, ENGIN  
; SMART, JOHN E.  
; TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING  
; PROLIFERATION OF EPITHELIAL CELLS.  
; NUMBER OF SEQUENCES: 33  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
; STREET: 45 SOUTH STREET  
; CITY: HOPKINTON  
; STATE: MA  
; COUNTRY: USA  
; ZIP: 01748  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patentin Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/10/050,050  
; FILING DATE: 15-Jan-2002  
; CLASSIFICATION: <Unknown>  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US/08/461,113

FILING DATE: <Unknown>  
APPLICATION NUMBER: US 08/445,882  
FILING DATE: 22-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-074DV  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note="HOP-1 (MATURE FORM)"  
US-10-050-050-5

Query Match 100.0%; Score 111; DB 14; Length 139;  
Best Local Similarity 100.0%; Pred. No. 5e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQLNIS 20  
Db 94 INPETHKPCCAPTQLNIS 113

RESULT 24  
US-10-366-345-63  
; Sequence 63, Application US/10366345  
; Publication No. US20030224501A1  
; GENERAL INFORMATION:  
; APPLICANT: Young, et al.  
; TITLE OF INVENTION: Bone Morphogenetic Protein Polynucleotides, Polypeptides and  
; FILE REFERENCE: Pti89  
; TITLE OF INVENTION: Antibodies  
; CURRENT APPLICATION NUMBER: US/10/366,345  
; CURRENT FILING DATE: 2003-02-14  
; NUMBER OF SEQ ID NOS: 77  
; SOFTWARE: Patentin version 3.2  
; SEQ ID NO 63  
; LENGTH: 139  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-366-345-63

Query Match 100.0%; Score 111; DB 14; Length 139;  
Best Local Similarity 100.0%; Pred. No. 5e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQLNIS 20  
Db 94 INPETHKPCCAPTQLNIS 113

RESULT 25  
US-10-108-260A-2783  
; Sequence 2783, Application US/10108260A  
; Publication No. US20040005560A1  
; GENERAL INFORMATION:  
; APPLICANT: HELIX RESEARCH INSTITUTE  
; TITLE OF INVENTION: No. US20040005560A1 full length cDNA  
; FILE REFERENCE: H1-A0106  
; CURRENT APPLICATION NUMBER: US/10/108,260A  
; CURRENT FILING DATE: 2002-03-27  
; NUMBER OF SEQ ID NOS: 5458  
; SOFTWARE: Patentin Ver. 2.1

SEQ ID NO 2783  
LENGTH: 139  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-108-260A-2783

Query Match 100.0%; Score 111; DB 15; Length 139;  
Best Local Similarity 100.0%; Pred. No. 5e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQLNIAIS 20  
Db 94 INPETHKPCCAPTQLNIAIS 113

RESULT 26  
US-10-385-064-5  
Sequence 5, Application US/10385064  
Publication No. US20040102373A1  
GENERAL INFORMATION:  
APPLICANT: Cohen, Charles M.  
APPLICANT: Kuberampath, Thangavel  
APPLICANT: Oppermann, Hermann  
APPLICANT: Rueger, David C.  
TITLE OF INVENTION: Protein induced Morphogenesis  
FILE REFERENCE: CEM-2 DIV (00950-502 DIV)  
CURRENT APPLICATION NUMBER: US/10/385,064  
CURRENT FILING DATE: 2003-03-10  
PRIOR APPLICATION NUMBER: US/09/464,206  
PRIOR FILING DATE: 1999-12-15  
PRIOR APPLICATION NUMBER: 08/396,684  
PRIOR FILING DATE: 1995-03-01  
NUMBER OF SEQ ID NOS: 16  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 5  
LENGTH: 139  
TYPE: PRT  
ORGANISM: Homo sapiens  
FEATURE:  
OTHER INFORMATION: tissue type hippocampus h0P1-MATURE  
US-10-385-064-5

Query Match 100.0%; Score 111; DB 16; Length 139;  
Best Local Similarity 100.0%; Pred. No. 5e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQLNIAIS 20  
Db 94 INPETHKPCCAPTQLNIAIS 113

RESULT 27  
US-09-765-527-249  
Sequence 249, Application US/09765527  
Patent No. US2002000638A1  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
NUMBER OF SEQUENCES: 265  
CORRESPONDENCE ADDRESS:  
ADDRESSER: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/765,527  
FILING DATE: 18-Jan-2001  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/621,803  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 249:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 161 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 249:  
US-09-765-527-249

Query Match 100.0%; Score 111; DB 9; Length 161;  
Best Local Similarity 100.0%; Pred. No. 5.7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQLNIAIS 20  
Db 116 INPETHKPCCAPTQLNIAIS 135

RESULT 28  
US-09-760-397-2  
Sequence 2, Application US/09760397  
Patent No. US20020009781A1  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
APPLICANT: Gavitt, Patrick D.  
TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production  
FILE REFERENCE: 1103/11041US01  
CURRENT APPLICATION NUMBER: US/09/760,397  
CURRENT FILING DATE: 2001-01-12  
PRIOR APPLICATION NUMBER: 09/271,970  
PRIOR FILING DATE: 1999-03-18  
NUMBER OF SEQ ID NOS: 16  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 2  
LENGTH: 161  
TYPE: PRT  
ORGANISM: Human  
US-09-760-397-2

Query Match 100.0%; Score 111; DB 9; Length 161;  
Best Local Similarity 100.0%; Pred. No. 5.7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQLNIAIS 20  
Db 116 INPETHKPCCAPTQLNIAIS 135

RESULT 29  
US-10-324-182-2  
Sequence 2, Application US/10324182  
Publication No. US20030194782A1  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
APPLICANT: Gavitt, Patrick D.  
TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production  
FILE REFERENCE: 1103/11041US01  
CURRENT APPLICATION NUMBER: US/10/324,182  
CURRENT FILING DATE: 2002-12-20  
PRIOR APPLICATION NUMBER: US/09/271,970

PRIOR FILING DATE: 1999-03-18  
NUMBER OF SEQ ID NOS: 16  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO 2  
LENGTH: 161  
TYPE: PRT  
ORGANISM: Human  
US-10-324-182-2

Query Match 100.0%; Score 111; DB 14; Length 161;  
Best Local Similarity 100.0%; Pred. No. 5.7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNALS 20  
Db 116 INPETHKPCCAPTOLNALS 135

RESULT 30  
US-08-957-425-9  
Sequence 9, Application US/08957425  
Publication No. US20030069401A1  
GENERAL INFORMATION:

APPLICANT: OPPERMAN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/957,425  
FILING DATE: 24-Oct-1997  
CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989

APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CPS  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 9:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 169 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 9:  
US-08-957-425-9

Query Match 100.0%; Score 111; DB 8; Length 169;  
Best Local Similarity 100.0%; Pred. No. 6e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNALS 20  
Db 124 INPETHKPCCAPTOLNALS 143

RESULT 31  
US-10-321-799-9  
Sequence 9, Application US/10321799  
Publication No. US20030224996A1  
GENERAL INFORMATION:

APPLICANT: OPPERMAN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/321,799  
FILING DATE: 17-Dec-2002  
CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 09/148,925  
FILING DATE: 8-SEP-1998  
APPLICATION NUMBER: US 08/449,699  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849

FILED DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: DIANA M. STEEL  
REGISTRATION NUMBER: 43,153  
REFERENCE/DOCKET NUMBER: STK-001CE6C3  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 9:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 169 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 9:  
US-10-321-799-9  
Query Match 100.0%; Score 111; DB 14; Length 169;  
Best Local Similarity 100.0%; Pred. No. 6e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHPCCAPTOLNAIS 20  
DB 124 INPETHPCCAPTOLNAIS 143

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA: US/10/428,997A  
FILING DATE: 02-May-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/957,425  
FILING DATE: 24-OCT-1997  
APPLICATION NUMBER: US 08/447,570  
FILING DATE: 23-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: BRIAN FAIRCHILD  
REGISTRATION NUMBER: 48,645  
REFERENCE/DOCKET NUMBER: STK-015C1  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 9:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 169 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 9:  
US-10-428-997A-9  
Query Match 100.0%; Score 111; DB 15; Length 169;  
Best Local Similarity 100.0%; Pred. No. 6e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHPCCAPTOLNAIS 20

Db 124 INPETHKPCCAPTOLNAIS 143

RESULT 33  
US-09-760-397-8  
; Sequence 8, Application US/09760397  
; Patent No. US20020009781A1  
; GENERAL INFORMATION:  
; APPLICANT: Better, Marc D.  
; APPLICANT: Gavitt, Patrick D.  
; TITLE OF INVENTION: Improved Method for Recombinant Peptide Production  
; FILE REFERENCE: 1103/1104US01  
; CURRENT APPLICATION NUMBER: US/09/760,397  
; CURRENT FILING DATE: 2001-01-12  
; PRIOR APPLICATION NUMBER: 09/271,970  
; PRIOR FILING DATE: 1999-03-18  
; NUMBER OF SEQ ID NOS: 16  
; SOFTWARE: Patentin Ver. 2.0  
; SEQ ID NO 8  
; LENGTH: 178  
; TYPE: PRT  
; ORGANISM: Human  
US-09-760-397-8

Query Match 100.0%; Score 111; DB 9; Length 178;  
Best Local Similarity 100.0%; Pred. No. 6.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 116 INPETHKPCCAPTOLNAIS 135

RESULT 34  
US-10-324-182-8  
; Sequence 8, Application US/10324182  
; Publication No. US20030194782A1  
; GENERAL INFORMATION:  
; APPLICANT: Better, Marc D.  
; APPLICANT: Gavitt, Patrick D.  
; TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production  
; FILE REFERENCE: 1103/1104US01  
; CURRENT APPLICATION NUMBER: US/10/324,182  
; CURRENT FILING DATE: 2002-12-20  
; PRIOR APPLICATION NUMBER: US/09/271,970  
; PRIOR FILING DATE: 1999-03-18  
; NUMBER OF SEQ ID NOS: 16  
; SOFTWARE: Patentin Ver. 2.0  
; SEQ ID NO 8  
; LENGTH: 178  
; TYPE: PRT  
; ORGANISM: Human  
US-10-324-182-8

Query Match 100.0%; Score 111; DB 14; Length 178;  
Best Local Similarity 100.0%; Pred. No. 6.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 116 INPETHKPCCAPTOLNAIS 135

RESULT 35  
US-09-765-527-257  
; Sequence 257, Application US/09765527  
; Patent No. US20020006638A1  
; GENERAL INFORMATION:  
; APPLICANT: Better, Marc D.  
; TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
; Fusion Proteins and BPI-Derived Peptides  
; NUMBER OF SEQUENCES: 265

## CORRESPONDENCE ADDRESS:

ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois

COUNTRY: United States of America  
ZIP: 60606-6402

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/765,527

FILING DATE: 18-Jan-2001  
PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/621,803  
FILING DATE: <Unknown>

## ATTORNEY/AGENT INFORMATION:

NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447

REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:

TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448

TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 257:

## SEQUENCE CHARACTERISTICS:

LENGTH: 179 amino acids  
TYPE: amino acid  
TOPOLOGY: linear

MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 257:

US-09-765-527-257

Query Match 100.0%; Score 111; DB 9; Length 179;  
Best Local Similarity 100.0%; Pred. No. 6.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 116 INPETHKPCCAPTOLNAIS 135

RESULT 36  
US-09-765-527-261

; Sequence 261, Application US/09765527  
; Patent No. US20020006638A1  
; GENERAL INFORMATION:

APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Methods for Recombinant Microbial Production of

Fusion Proteins and BPI-Derived Peptides  
NUMBER OF SEQUENCES: 265

## CORRESPONDENCE ADDRESS:

ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago

STATE: Illinois  
COUNTRY: United States of America

ZIP: 60606-6402  
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/765,527

FILING DATE: 18-Jan-2001  
PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/621,803  
FILING DATE: <Unknown>

## ATTORNEY/AGENT INFORMATION:

NAME: Borun, Michael F.



REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 261:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 179 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 261:  
US-09-765-527-261

Query Match 100.0%; Score 111; DB 9; Length 179;  
Best Local Similarity 100.0%; Pred. No. 6,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCAPQTQNLNLS 20  
DB 116 INPETHPKPCAPQTQNLNLS 135

RESULT 37  
US-09-760-397-14  
Sequence 14, Application US/09760397  
Patent No. US20020009781A1  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
APPLICANT: Gavitt, Patrick D.  
TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production  
FILE REFERENCE: 1103/1104US01  
CURRENT APPLICATION NUMBER: US/09/760,397  
CURRENT FILING DATE: 2001-01-12  
PRIOR APPLICATION NUMBER: 09/271,970  
PRIOR FILING DATE: 1999-03-18  
NUMBER OF SEQ ID NOS: 16  
SOFTWARE: Patent In Ver. 2.0  
SEQ ID NO 14  
LENGTH: 190  
TYPE: PRT  
ORGANISM: Human  
US-09-760-397-14

Query Match 100.0%; Score 111; DB 9; Length 190;  
Best Local Similarity 100.0%; Pred. No. 6,7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCAPQTQNLNLS 20  
DB 116 INPETHPKPCAPQTQNLNLS 135

RESULT 38  
US-10-324-182-14  
Sequence 14, Application US/10324182  
Publication No. US20030194782A1  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
APPLICANT: Gavitt, Patrick D.  
TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production  
FILE REFERENCE: 1103/1104US01  
CURRENT APPLICATION NUMBER: US/10/324,182  
CURRENT FILING DATE: 2002-12-20  
PRIOR APPLICATION NUMBER: US/09/271,970  
PRIOR FILING DATE: 1999-03-18  
NUMBER OF SEQ ID NOS: 16  
SOFTWARE: Patent In Ver. 2.0  
SEQ ID NO 14  
LENGTH: 190  
TYPE: PRT  
ORGANISM: Human

US-10-324-182-14

Query Match 100.0%; Score 111; DB 14; Length 190;  
Best Local Similarity 100.0%; Pred. No. 6,7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCAPQTQNLNLS 20  
DB 116 INPETHPKPCAPQTQNLNLS 135

RESULT 39  
US-09-765-527-255  
Sequence 255, Application US/09765527  
Patent No. US2002000638A1  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
NUMBER OF SEQUENCES: 265  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/765,527  
FILING DATE: 18-Jan-2001  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/621,803  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 255:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 194 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 255:  
US-09-765-527-255

Query Match 100.0%; Score 111; DB 9; Length 194;  
Best Local Similarity 100.0%; Pred. No. 6,8e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCAPQTQNLNLS 20  
DB 116 INPETHPKPCAPQTQNLNLS 135

RESULT 40  
US-09-765-527-263  
Sequence 263, Application US/09765527  
Patent No. US2002000638A1  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
Fusion Proteins and BPI-Derived Peptides  
NUMBER OF SEQUENCES: 265

CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/765,527  
FILING DATE: 18-Jan-2001  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/621,803  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 263:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 195 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 263:  
US-09-765-527-263

Query Match 100.0%; Score 111; DB 9; Length 195;  
Best Local Similarity 100.0%; Pred. No. 6.9e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKCCAPPTQNLAI 20  
DB 116 INPETHKCCAPPTQNLAI 135

RESULT 41  
US-08-957-425-11  
Sequence 11, Application US/08957425  
Publication No. US20030069401A1  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/957,425  
FILING DATE: 24-Oct-1997  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 317 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 11:  
US-08-957-425-11

Query Match 100.0%; Score 111; DB 8; Length 317;  
Best Local Similarity 100.0%; Pred. No. 1.1e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKCCAPPTQNLAI 20  
DB 272 INPETHKCCAPPTQNLAI 291

RESULT 42  
US-10-321-799-11  
Sequence 11, Application US/10321799  
Publication No. US2003022496A1  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON

STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.25  
CURRENT APPLICATION DATA: US/10/321,799  
APPLICATION NUMBER: US/10/321,799  
FILING DATE: 17-Dec-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 09/148,925  
FILING DATE: 8-SEP-1998  
APPLICATION NUMBER: US 08/449,699  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/222,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: DIANA M. STEEL  
REGISTRATION NUMBER: 43,153  
REFERENCE/DOCKET NUMBER: STX-001CPEC3  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7100  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 317 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 11:  
US-10-321-799-11

Query Match 100.0%; Score 111; DB 14; Length 317;  
Best Local Similarity 100.0%; Pred. No. 1,1e-06;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTOLNALS 20  
DB 272 INPETHKPCCAPTOLNALS 291  
RESULT 43  
US-10-428-997A-11  
Sequence 11, Application US/10428997A  
Publication No. US2004007546A1  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H. L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURNITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.25  
CURRENT APPLICATION DATA: US/10/428,997A  
APPLICATION NUMBER: US/10/428,997A  
FILING DATE: 02-May-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/957,425  
FILING DATE: 24-OCT-1997  
APPLICATION NUMBER: US 08/447,570  
FILING DATE: 23-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699

FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: BRIAN FAIRCHILD  
REGISTRATION NUMBER: 48,645  
REFERENCE/DOCKET NUMBER: STR-015C1  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 317 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 11:  
US-10-428-997A-11

Query Match 100.0%; Score 111; DB 15; Length 317;  
Best Local Similarity 100.0%; Pred. No. 1.1e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPVTVPKCCAPTQLNLAIS 20  
DB 272 INPVTVPKCCAPTQLNLAIS 291

RESULT 44  
US-08-957-425-15  
Sequence 15, Application US/08957425  
Publication No. US20030069401A1  
GENERAL INFORMATION:  
APPLICANT: OPPERMANN, HERMANN  
OZKAYNAK, ENGİN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/957,425  
FILING DATE: 24-Oct-1997  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990

APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 15:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 408 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 15:  
US-08-957-425-15

Query Match 100.0%; Score 111; DB 8; Length 408;  
Best Local Similarity 100.0%; Pred. No. 1.4e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPVTVPKCCAPTQLNLAIS 20  
DB 363 INPVTVPKCCAPTQLNLAIS 382

RESULT 45  
US-10-321-799-15  
Sequence 15, Application US/10321799  
Publication No. US2003022496A1  
GENERAL INFORMATION:  
APPLICANT: OPPERMANN, HERMANN  
OZKAYNAK, ENGİN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/321,799  
FILING DATE: 17-Dec-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 09/148,925

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Page 19

FILING DATE: 8-SEP-1998  
APPLICATION NUMBER: US 08/449,699  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: DIANA M. STEEL  
REGISTRATION NUMBER: 43,153  
REFERENCE/DOCKET NUMBER: STR-001CPEC3  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 15:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 408 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 15:  
US-10-321-799-15

Query Match 100.0%; Score 111; DB 14; Length 408;  
Best Local Similarity 100.0%; Pred. No. 1.4e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQNLAIIS 20  
DB 363 INPETYKPCCAPTQNLAIIS 382

RESULT 46  
US-10-428-997A-15  
; Sequence 15, Application US/10428997A  
; Publication No. US20040077546A1  
; GENERAL INFORMATION:  
; APPLICANT: OPPERMAN, HERMANN  
; OZKAYNAK, ENGİN

KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/428,997A  
FILING DATE: 02-May-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/957,425  
FILING DATE: 24-OCT-1997  
APPLICATION NUMBER: US 08/447,570  
FILING DATE: 23-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1988  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: BRIAN FAIRCHILD  
REGISTRATION NUMBER: 48,645  
REFERENCE/DOCKET NUMBER: STR-015C1  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 15:  
SEQUENCE CHARACTERISTICS:

LENGTH: 408 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 15:  
US-10-428-997A-15

Query Match 100.0%; Score 111; DB 15; Length 408;  
Best Local Similarity 100.0%; Pred. No. 1.4e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNALS 20  
DB 363 INPETHKPCCAPTQNLNALS 382

RESULT 47  
US-10-367-094-171  
Sequence 171, Application US/10367094  
Publication No. US20040170982A1  
GENERAL INFORMATION:  
APPLICANT: David W. Morris  
APPLICANT: Marc Malandro  
TITLE OF INVENTION: Novel Therapeutic Targets in Cancer  
FILE REFERENCE: 529452001500  
CURRENT APPLICATION NUMBER: US/10/367,094  
CURRENT FILING DATE: 2003-02-14  
NUMBER OF SEQ ID NOS: 203  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO: 171  
LENGTH: 427  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-367-094-171

Query Match 100.0%; Score 111; DB 16; Length 427;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNALS 20  
DB 382 INPETHKPCCAPTQNLNALS 401

RESULT 48  
US-10-367-094-175  
Sequence 175, Application US/10367094  
Publication No. US20040170982A1  
GENERAL INFORMATION:  
APPLICANT: David W. Morris  
APPLICANT: Marc Malandro  
TITLE OF INVENTION: Novel Therapeutic Targets in Cancer  
FILE REFERENCE: 529452001500  
CURRENT APPLICATION NUMBER: US/10/367,094  
CURRENT FILING DATE: 2003-02-14  
NUMBER OF SEQ ID NOS: 203  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO: 175  
LENGTH: 427  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-367-094-175

Query Match 100.0%; Score 111; DB 16; Length 427;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNALS 20  
DB 382 INPETHKPCCAPTQNLNALS 401

RESULT 49

US-08-822-186-2  
Sequence 2, Application US/08822186  
Publication No. US20010014662A1  
GENERAL INFORMATION:  
APPLICANT: RUEGER, David C.  
APPLICANT: RUEGER, Mariorie M.  
TITLE OF INVENTION: IMPROVED OSTEOGENIC DEVICES AND METHODS  
TITLE OF INVENTION: OF USE THEREOF FOR REPAIR OF ENDOCHONDRAL BONE AND  
NUMBER OF SEQUENCES: 9  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748

COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/822,186  
FILING DATE:  
CLASSIFICATION: 530  
ATTORNEY/AGENT INFORMATION:  
NAME: VITO CHRISTINE C  
REGISTRATION NUMBER: 39,061  
REFERENCE/DOCKET NUMBER: CRP-137  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-822-186-2

Query Match 100.0%; Score 111; DB 8; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNALS 20  
DB 366 INPETHKPCCAPTQNLNALS 405

RESULT 50  
US-08-937-755-2  
Sequence 2, Application US/08937755  
Publication No. US20020049159A1  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: SAMPATH, KOBER T.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR THE  
TITLE OF INVENTION: TREATMENT OF MOTOR NEURON INJURY AND NEUROPATHY  
NUMBER OF SEQUENCES: 9  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: PATENT ADMINISTRATOR, TESTA, HURWITZ &  
ADDRESS: THIBEAULT, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110

COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk

COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/937,755  
FILING DATE:  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: METERS, THOMAS C.  
REGISTRATION NUMBER: 36,989  
REFERENCE/DOCKET NUMBER: CRP-155  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7013  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-937-755-2

Query Match 100.0%; Score 111; DB 8; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
DB 386 INPETYKPCCAPTOLNALS 405

RESULT 51  
US-08-957-425-2  
Sequence 2, Application US/08957425  
Publication No. US20030069401A1  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/957,425  
FILING DATE: 24-Oct-1997  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 616,374

FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-08-957-425-2

Query Match 100.0%; Score 111; DB 8; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
DB 386 INPETYKPCCAPTOLNALS 405

RESULT 52  
US-08-260-675-17  
Sequence 17, Application US/08260675  
Publication No. US2003010493A1  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C.  
KUBERASAMPATH, THANGAVEL  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: WORKROGEN-INDUCED NERVE REGENERATION AND  
REPAIR  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA HURWITZ & THIBEAULT  
STREET: 55 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02140  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/260,675  
FILING DATE:

CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/126,100  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/07/922,813  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-070  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-260-675-17

Query Match 100.0%; Score 111; DB 8; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQNLNLS 20  
Db 386 INPETHKPCCAPTQNLNLS 405

RESULT 53  
US-09-045-331-2  
Sequence 2, Application US/09045331  
Patent No. US20010016646A1  
GENERAL INFORMATION:  
APPLICANT: RUEGER, David C.  
APPLICANT: TUCKER, Marjorie M.  
TITLE OF INVENTION: IMPROVED OSTEOGENIC DEVICES AND METHODS  
TITLE OF INVENTION: OF USE THEREOF FOR REPAIR OF ENDOCHONDRAL BONE AND  
NUMBER OF SEQUENCES: 9  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/045,331  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/822,186  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: VITO, CHRISTINE C  
REGISTRATION NUMBER: 39,061  
REFERENCE/DOCKET NUMBER: CRP-137  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000

TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-045-331-2

Query Match 100.0%; Score 111; DB 9; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQNLNLS 20  
Db 386 INPETHKPCCAPTQNLNLS 405

RESULT 54  
US-09-828-607-2  
Sequence 2, Application US/09828607  
Patent No. US20010024823A1  
GENERAL INFORMATION:  
APPLICANT: STRYKER CORPORATION  
TITLE OF INVENTION: REPAIR OF LARYNX, TRACHEA, AND OTHER FIBROCARITLAGINOUS  
TITLE OF INVENTION: TISSUES  
FILE REFERENCE: STX-070 PCT  
CURRENT APPLICATION NUMBER: US/09/828,607  
CURRENT FILING DATE: 2001-04-06  
NUMBER OF SEQ ID NOS: 9  
SOFTWARE: Patentin Ver. 2.1  
SEQ ID NO 2  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-828-607-2

Query Match 100.0%; Score 111; DB 9; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQNLNLS 20  
Db 386 INPETHKPCCAPTQNLNLS 405

RESULT 55  
US-09-887-901-2  
Sequence 2, Application US/09887901  
Publication No. US20020091077A1  
GENERAL INFORMATION:  
APPLICANT: RUEGER, David C  
APPLICANT: TUCKER, Marjorie M  
TITLE OF INVENTION: MATRIX-FREE OSTEOGENIC DEVICES, IMPLANTS AND  
METHODS OF USE THEREOF  
NUMBER OF SEQUENCES: 8  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: James F. Haley, Jr., Esq. c/o FISH & NEAVE  
STREET: 1251 Avenue of the Americas  
CITY: New York  
STATE: New York  
COUNTRY: United States of America  
ZIP: 10020  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30 (EBO)  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/887,901  
FILING DATE: 22-Jun-2001  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:



Tue Oct 26 09:17:06 2004

us-10-619-910-11.oct24.rapb

Page 23

APPLICATION NUMBER: 09/019,339  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: James F. Haley, Jr., Esq.  
REGISTRATION NUMBER: 27,794  
REFERENCE/DOCKET NUMBER: CRP-147  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (212)596-9090  
TELEFAX: (212)596-9090  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-09-887-901-2

Query Match 100.0%; Score 111; DB 9; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQLNLAIS 20  
DB 386 INPETYKPCCAPTQLNLAIS 405

RESULT 56  
US-09-982-543A-10  
Sequence 10, Application US/09982543A  
Patent No. US20020155500A1  
GENERAL INFORMATION:  
APPLICANT: DiJke, P.  
APPLICANT: Miyazano, K.  
APPLICANT: Sampath, K.  
APPLICANT: Heldin, C.  
TITLE OF INVENTION: MORPHOGENIC PROTEIN-SPECIFIC CELL SURFACE RECEPTORS AND USES  
TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: CIBT-P04-543  
CURRENT APPLICATION NUMBER: US/09/982,543A  
CURRENT FILING DATE: 2001-10-18  
PRIOR APPLICATION NUMBER: 08/448,371  
PRIOR FILING DATE: 1995-06-02  
NUMBER OF SEQ ID NOS: 15  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 10  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-982-543A-10

Query Match 100.0%; Score 111; DB 9; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQLNLAIS 20  
DB 386 INPETYKPCCAPTQLNLAIS 405

RESULT 57  
US-09-039-107-2  
Sequence 2, Application US/09039107  
Publication No. US20030032586A1  
GENERAL INFORMATION:  
APPLICANT: David C. Rueger and Marjorie M. Tucker  
TITLE OF INVENTION: COMPOSITIONS FOR MORPHOGEN-INDUCED  
NUMBER OF SEQUENCES: 9  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: FISH & NEAVE  
STREET: 1250 AVENUE OF THE AMERICAS  
CITY: NEW YORK

STATE: NY  
COUNTRY: USA  
ZIP: 10020  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/039,107  
FILING DATE: 14 Mar 1998  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: Z. YING LI  
REGISTRATION NUMBER: 42,800  
REFERENCE/DOCKET NUMBER: STX-068 (CRP-112)  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (212) 596-9000  
TELEFAX: (212) 596-9090  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-039-107-2

Query Match 100.0%; Score 111; DB 10; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQLNLAIS 20  
DB 386 INPETYKPCCAPTQLNLAIS 405

RESULT 58  
US-09-798-518-1  
Sequence 1, Application US/09798518  
Publication No. US20030049328A1  
GENERAL INFORMATION:  
APPLICANT: DALAL, PARISH S.  
APPLICANT: DIMAMBO, GODOFREDO R.  
APPLICANT: TOTH, CAROL ANN  
APPLICANT: KULKARNI, SHALISH C.  
TITLE OF INVENTION: POROUS BETA-TRICALCIUM PHOSPHATE GRANULES AND METHODS  
TITLE OF INVENTION: FOR PRODUCING SAME  
FILE REFERENCE: STX-8  
CURRENT APPLICATION NUMBER: US/09/798,518  
CURRENT FILING DATE: 2001-03-02  
NUMBER OF SEQ ID NOS: 9  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 1  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-798-518-1

Query Match 100.0%; Score 111; DB 10; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQLNLAIS 20  
DB 386 INPETYKPCCAPTQLNLAIS 405

RESULT 59  
US-09-540-466-2  
Sequence 2, Application US/09540466  
Publication No. US20030104577A1  
GENERAL INFORMATION:  
APPLICANT: RIBAMONTI, UGO

```

; APPLICANT: RAMOSHEB, LENTSHA N.
; TITLE OF INVENTION: METHODS FOR INDUCING ANGIOGENESIS USING MORPHOGENIC
; FILE REFERENCE: STR-6
; CURRENT APPLICATION NUMBER: US/09/540,466
; NUMBER OF SEQ ID NOS: 10
; SOFTWARE: Patent In Ver. 2.1
; SEQ ID NO 2
; LENGTH: 431
; TYPE: PRF
; ORGANISM: Homo sapiens
US-09-540-466-2

Query Match
Best Local Similarity 100.0%; Score 111; DB 10; Length 431;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 60
US-09-423-943-2
; Sequence 2, Application US/09423943
; Publication No. US20030109686A1
; GENERAL INFORMATION:
; APPLICANT: Sampath, Kuber T.
; TITLE OF INVENTION: Methods For Tissue Morphogenesis and Methods for
; FILE REFERENCE: Seq. Listing For CBM-70 WO
; CURRENT APPLICATION NUMBER: US/09/423,943
; NUMBER OF SEQ ID NOS: 9
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 2
; LENGTH: 431
; TYPE: PRF
; ORGANISM: Homo sapiens
US-09-423-943-2

Query Match
Best Local Similarity 100.0%; Score 111; DB 10; Length 431;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 61
US-09-012-846-2
; Sequence 2, Application US/09012846
; Publication No. US20030170213A1
; GENERAL INFORMATION:
; APPLICANT: Marc F. Charette
; TITLE OF INVENTION: Methods and Compositions for Enhancing Cognitive Function us
; NUMBER OF SEQUENCES: 9
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: CREATIVE BIOMOLECULES, INC
; STREET: 45 SOUTH STREET
; CITY: HOPKINTON
; STATE: MA
; COUNTRY: USA
; ZIP: 01748
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
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; APPLICATION NUMBER: US/09/012,846
; FILING DATE:
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Thomas C. Meyers
; REGISTRATION NUMBER:
; REFERENCE/DOCKET NUMBER: CRP-141
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617) 248-7000
; TELEFAX: (617) 248-7100
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 431 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-012-846-2

Query Match
Best Local Similarity 100.0%; Score 111; DB 10; Length 431;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 62
US-09-960-789-1
; Sequence 1, Application US/09960789
; Publication No. US20030180376A1
; GENERAL INFORMATION:
; APPLICANT: DALAL, PARESH S.
; APPLICANT: DIMANCO, GODOFREDO R.
; APPLICANT: TOTI, CAROL ANN
; APPLICANT: KULKARNI, SHALISH C.
; TITLE OF INVENTION: POROUS BETA-TRICALCIUM PHOSPHATE GRANULES AND METHODS
; FILE REFERENCE: STR-8 CIP
; CURRENT APPLICATION NUMBER: US/09/960,789
; PRIOR APPLICATION NUMBER: 2001-09-21
; NUMBER OF SEQ ID NOS: 2001-03-02
; NUMBER OF SEQ ID NOS: 10
; SOFTWARE: Patent In Ver. 2.1
; SEQ ID NO 1
; LENGTH: 431
; TYPE: PRF
; ORGANISM: Homo sapiens
US-09-960-789-1

Query Match
Best Local Similarity 100.0%; Score 111; DB 10; Length 431;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 63
US-09-952-318A-17
; Sequence 17, Application US/09952318A
; Publication No. US20030224979A1
; GENERAL INFORMATION:
; APPLICANT: Kuberampath et al.
; TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR INCREASE BONE MASS IN
; FILE REFERENCE: JTG-P06-522
; CURRENT APPLICATION NUMBER: US/09/952,318A
; CURRENT FILING DATE: 2001-09-13
; PRIOR APPLICATION NUMBER: 09/170,936
; PRIOR FILING DATE: 1998-10-13
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Tue Oct 26 09:17:06 2004

us-10-619-910-11.oct24.rapb

Page 25

PRIOR APPLICATION NUMBER: 08/432,883  
PRIOR FILING DATE: 1995-05-02  
PRIOR APPLICATION NUMBER: 08/115,914  
PRIOR FILING DATE: 1993-09-01  
PRIOR APPLICATION NUMBER: 07/923,780  
PRIOR FILING DATE: 1992-07-31  
PRIOR APPLICATION NUMBER: 07/752,847  
PRIOR FILING DATE: 1991-08-30  
PRIOR APPLICATION NUMBER: 07/667,274  
PRIOR FILING DATE: 1991-03-11  
NUMBER OF SEQ ID NOS: 33  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO: 17  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-952-318A-17

Query Match 100.0%; Score 111; DB 10; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 64  
US-10-062-370-5  
Sequence 5, Application US/10062370  
Publication No. US2003002830A1  
GENERAL INFORMATION:  
APPLICANT: CHARITTE, Marc F.  
FINKLESTEIN, Seth P.  
TITLE OF INVENTION: METHODS FOR ENHANCING FUNCTIONAL  
RECOVERY FOLLOWING CENTRAL NERVOUS SYSTEM ISCHEMIA OR  
TRAUMA  
NUMBER OF SEQUENCES: 9  
CORRESPONDENCE ADDRESS:  
ADDRESSER: CREATIVE BIOMOLECULES, INC  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/062,370  
FILING DATE: 01-Feb-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/828,281  
FILING DATE: 1997-MAR-21  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON, GILLIAN M  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-069CP  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 5:  
US-10-062-370-5

Query Match 100.0%; Score 111; DB 14; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 65  
US-10-083-825-2  
Sequence 2, Application US/10083825  
Publication No. US20030064090A1  
GENERAL INFORMATION:  
APPLICANT: KHOURI, ROGER K.  
SAMPATH, KUBER T.  
RUEGER, DAVID C.  
TITLE OF INVENTION: MANUFACTURE OF AUTOGENOUS REPLACEMENT  
BODY PARTS  
NUMBER OF SEQUENCES: 3  
CORRESPONDENCE ADDRESS:  
ADDRESSER: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/083,825  
FILING DATE: 27-Feb-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/459,129  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY, ROBIN D.  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP-101  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7100  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-10-083-825-2

Query Match 100.0%; Score 111; DB 14; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 66  
US-10-122-026-2  
Sequence 2, Application US/10122026  
Publication No. US20030105004A1  
GENERAL INFORMATION:  
APPLICANT: JONES, WILLIAM K  
TUCKER, RONALD F  
RUEGER, DAVID C  
OPPERMANN, HERMANN

OZKAYNAK, ENGIN  
KUBERASAPATH, THANGAVEL  
TITLE OF INVENTION: NOVEL MORPHOGENIC PROTEIN COMPOSITIONS  
OF MATTER  
NUMBER OF SEQUENCES: 23  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Patent Administrator, Testa, Hurwitz &  
Thibault LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/122,026  
FILING DATE: 29-AUG-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/402,542  
FILING DATE: 13-MAR-1995  
APPLICATION NUMBER: US 08/840,510  
FILING DATE: 31-MAR-1993  
APPLICATION NUMBER: US 08/029,335  
FILING DATE: 04-MAR-1993  
APPLICATION NUMBER: US 07/971,091  
FILING DATE: 03-NOV-1992  
APPLICATION NUMBER: US 07/946,235  
FILING DATE: 16-SEP-1992  
APPLICATION NUMBER: US 07/938,336  
FILING DATE: 28-AUG-1992  
APPLICATION NUMBER: US 07/923,780  
FILING DATE: 31-JUL-1992  
APPLICATION NUMBER: US 07/752,857  
FILING DATE: 30-AUG-1991  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: CAMACHO, JENNIFER A.  
REGISTRATION NUMBER: 43,526  
REFERENCE/DOCKET NUMBER: STK-060CN  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-10-122-026-2  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-10-122-026-2  
Query Match 100.0%; Score 111; DB 14; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTQLNALS 20  
DB 386 INPETHKPCCAPTQLNALS 405  
RESULT 67  
US-10-272-503-2  
Sequence 2, Application US/10272503  
Publication No. US20030109445A1  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C.  
SAMPATE, KOBER T.  
OPPERMANN, HERMANN

PANG, ROY H. L.  
COHEN, CHARLES M.  
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR THE  
TREATMENT AND PREVENTION OF PARKINSON'S DISEASE  
NUMBER OF SEQUENCES: 9  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, TESTA, HURWITZ &  
THIBAUT, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/272,503  
FILING DATE: 16-Oct-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/938,622  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: MEYERS, THOMAS C.  
REGISTRATION NUMBER: 36,989  
REFERENCE/DOCKET NUMBER: CRP-128  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7100  
FAX: (617) 248-7013  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-10-272-503-2  
Query Match 100.0%; Score 111; DB 14; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTQLNALS 20  
DB 386 INPETHKPCCAPTQLNALS 405  
RESULT 68  
US-10-050-050-17  
Sequence 17, Application US/10050050  
Publication No. US20030125230A1  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M.  
CHARETTE, MARC F.  
KUBERASAPATH, THANGAVEL  
RUEGER, DAVID C.  
OPPERMANN, HERMANN  
PANG, ROY H. L.  
OZKAYNAK, ENGIN  
SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING  
PROLIFERATION OF EPITHELIAL CELLS.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748

```
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
  APPLICATION NUMBER: US/10/050,050
  FILING DATE: 15-Jan-2002
  CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
  APPLICATION NUMBER: US/08/461,113
  FILING DATE: <Unknown>
  APPLICATION NUMBER: US 08/445,882
  FILING DATE: 22-MAY-1995
ATTORNEY/AGENT INFORMATION:
  NAME: FENTON ESQ., GILFILLAN M.
  REGISTRATION NUMBER: 36,508
  REFERENCE/DOCKET NUMBER: CRP-074DV
TELECOMMUNICATION INFORMATION:
  TELEPHONE: (508) 435-9001
  TELEFAX: (508) 435-6951
INFORMATION FOR SEQ ID NO: 17:
  SEQUENCE CHARACTERISTICS:
    LENGTH: 431 amino acids
    TYPE: amino acid
    TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 17:
US-10-050-050-17

Query Match      100.0%; Score 111; DB 14; Length 431;
Best Local Similarity 100.0%; Pred. No. 1.5e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 INPETHKPCCAPTQLNLAIS 20
DB      386 INPETHKPCCAPTQLNLAIS 405

RESULT 69
US-10-286-152A-8
; Sequence 8, Application US/10286152A
; Publication No. US20030134308A1
; GENERAL INFORMATION:
; APPLICANT: Alcon Research, Ltd.
; TITLE OF INVENTION: Bone Morphogenetic Proteins (BMP), BMP Receptors and BMP Binding Pr
; TITLE OF INVENTION: and Their Use in the Diagnosis and Treatment of Glaucoma
; FILE REFERENCE: 2312 US
; CURRENT APPLICATION NUMBER: US/10/286,152A
; CURRENT FILING DATE: 2002-02-28
; NUMBER OF SEQ ID NOS: 54
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 8
; LENGTH: 431
; TYPE: PRT
; ORGANISM: homo sapiens
US-10-286-152A-8

Query Match      100.0%; Score 111; DB 14; Length 431;
Best Local Similarity 100.0%; Pred. No. 1.5e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 INPETHKPCCAPTQLNLAIS 20
DB      386 INPETHKPCCAPTQLNLAIS 405

RESULT 70
US-10-301-822-10
; Sequence 10, Application US/10301822
; Publication No. US20030148410A1
; GENERAL INFORMATION:
```

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APPLICANT: Millennium Pharmaceuticals, Inc.
APPLICANT: Berger, Allison
APPLICANT: Guillemette, Tracy L.
APPLICANT: Kamatkar, Shubhangi
APPLICANT: Schlegel, Robert
APPLICANT: Monahan, John E.
APPLICANT: Thibodeau, Stephen N.
APPLICANT: Burgart, Lawrence J.
TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND
TITLE OF INVENTION: METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND
FILE REFERENCE: MPM01-02952RNM
CURRENT APPLICATION NUMBER: US/10/301,822
CURRENT FILING DATE: 2002-11-21
PRIOR APPLICATION NUMBER: US 60/339,971
PRIOR FILING DATE: 2001-12-10
PRIOR APPLICATION NUMBER: US 60/361,978
PRIOR FILING DATE: 2002-03-05
PRIOR APPLICATION NUMBER: US 60/381,988
PRIOR FILING DATE: 2002-05-20
NUMBER OF SEQ ID NOS: 228
SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 10
; LENGTH: 431
; TYPE: PRT
; ORGANISM: Homo Sapiens
US-10-301-822-10

Query Match      100.0%; Score 111; DB 14; Length 431;
Best Local Similarity 100.0%; Pred. No. 1.5e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 INPETHKPCCAPTQLNLAIS 20
DB      386 INPETHKPCCAPTQLNLAIS 405

RESULT 71
US-10-366-345-39
; Sequence 39, Application US/10366345
; Publication No. US20030224501A1
; GENERAL INFORMATION:
; APPLICANT: Young, et al.
; TITLE OF INVENTION: Bone Morphogenetic Protein Polynucleotides, Polypeptides and
; TITLE OF INVENTION: Antibodies
; FILE REFERENCE: PT189
; CURRENT APPLICATION NUMBER: US/10/366,345
; CURRENT FILING DATE: 2003-02-14
; NUMBER OF SEQ ID NOS: 77
; SOFTWARE: Patentin version 3.2
; SEQ ID NO 39
; LENGTH: 431
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-366-345-39

Query Match      100.0%; Score 111; DB 14; Length 431;
Best Local Similarity 100.0%; Pred. No. 1.5e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 INPETHKPCCAPTQLNLAIS 20
DB      386 INPETHKPCCAPTQLNLAIS 405

RESULT 72
US-10-321-799-2
; Sequence 2, Application US/10321799
; Publication No. US20030224996A1
; GENERAL INFORMATION:
APPLICANT: OPPERMAN, HERMANN
OZKAYNAK, ENGIN
KUBERASAMPATH, THIANGAVEL
```

RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESS: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/321,799  
FILING DATE: 17-Dec-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 09/148,925  
FILING DATE: 8-SEP-1998  
APPLICATION NUMBER: US 08/449,699  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: DIANA M. STEEL  
REGISTRATION NUMBER: 43,153  
REFERENCE/DOCKET NUMBER: STR-001CP6C3  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids

TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-10-321-799-2  
Query Match 100.0%; Score 111; DB 14; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCAPQTNLAIS 20  
DB 386 INPETHKPCAPQTNLAIS 405  
RESULT 73  
US-10-295-027-518  
Sequence 518, Application US/10295027  
Publication No. US2003023250A1  
GENERAL INFORMATION:  
APPLICANT: A'ar, Daniel  
APPLICANT: Aziz, Natasha  
APPLICANT: Ginsberg, Wendy M.  
APPLICANT: Gish, Kurt C.  
APPLICANT: Glynn, Richard  
APPLICANT: Hevizi, Peter A.  
APPLICANT: Mack, David H.  
APPLICANT: Murray, Richard  
APPLICANT: Watson, Susan R.  
APPLICANT: Eos Biotechnology, Inc.  
TITLE OF INVENTION: Methods of Diagnosis of Cancer, Compositions and  
TITLE OF INVENTION: Methods of Screening for Modulators of Cancer  
FILE REFERENCE: 018501-012500US  
CURRENT APPLICATION NUMBER: US/10/295,027  
CURRENT FILING DATE: 2002-11-13  
PRIOR APPLICATION NUMBER: US 09/663,733  
PRIOR FILING DATE: 2000-09-15  
PRIOR APPLICATION NUMBER: US 60/350,666  
PRIOR FILING DATE: 2001-11-13  
PRIOR APPLICATION NUMBER: US 60/335,394  
PRIOR FILING DATE: 2001-11-15  
PRIOR APPLICATION NUMBER: US 60/332,464  
PRIOR FILING DATE: 2001-11-21  
PRIOR APPLICATION NUMBER: US 60/334,393  
PRIOR FILING DATE: 2001-11-29  
PRIOR APPLICATION NUMBER: US 60/340,376  
PRIOR FILING DATE: 2001-12-14  
PRIOR APPLICATION NUMBER: US 60/347,211  
PRIOR FILING DATE: 2002-01-08  
PRIOR APPLICATION NUMBER: US 60/347,349  
PRIOR FILING DATE: 2002-01-10  
PRIOR APPLICATION NUMBER: US 60/355,250  
PRIOR FILING DATE: 2002-02-08  
PRIOR APPLICATION NUMBER: US 60/356,714  
PRIOR FILING DATE: 2002-02-13  
Remaining Prior Application data removed - See file wrapper or PALM.  
NUMBER OF SEQ ID NOS: 1386  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 518  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-295-027-518  
Query Match 100.0%; Score 111; DB 14; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCAPQTNLAIS 20  
DB 386 INPETHKPCAPQTNLAIS 405

RESULT 74  
US-10-295-027-787  
; Sequence 787, Application US/10295027  
; Publication No. US2003023350A1  
; GENERAL INFORMATION:  
; APPLICANT: Afar, Daniel  
; APPLICANT: Aziz, Natasha  
; APPLICANT: Ginsberg, Wendy M.  
; APPLICANT: Gish, Kurt C.  
; APPLICANT: Glynn, Richard  
; APPLICANT: Hevez, Peter A.  
; APPLICANT: Mack, David H.  
; APPLICANT: Murray, Richard  
; APPLICANT: Watson, Susan R.  
; APPLICANT: Eos Biotechnology, Inc.  
; TITLE OF INVENTION: Methods of Diagnosis of Cancer, Compositions and  
; TITLE OF INVENTION: Methods of Screening for Modulators of Cancer  
; FILE REFERENCE: 018501-012500US  
; CURRENT FILING DATE: 2002-11-13  
; PRIOR FILING DATE: 2002-11-13  
; PRIOR APPLICATION NUMBER: US 09/663,733  
; PRIOR FILING DATE: 2000-09-15  
; PRIOR APPLICATION NUMBER: US 60/350,666  
; PRIOR FILING DATE: 2001-11-13  
; PRIOR APPLICATION NUMBER: US 60/335,394  
; PRIOR FILING DATE: 2001-11-15  
; PRIOR APPLICATION NUMBER: US 60/332,464  
; PRIOR FILING DATE: 2001-11-21  
; PRIOR APPLICATION NUMBER: US 60/334,393  
; PRIOR FILING DATE: 2001-11-29  
; PRIOR APPLICATION NUMBER: US 60/340,376  
; PRIOR FILING DATE: 2001-12-14  
; PRIOR APPLICATION NUMBER: US 60/347,211  
; PRIOR FILING DATE: 2002-01-08  
; PRIOR APPLICATION NUMBER: US 60/347,349  
; PRIOR FILING DATE: 2002-01-10  
; PRIOR APPLICATION NUMBER: US 60/355,250  
; PRIOR FILING DATE: 2002-02-08  
; PRIOR APPLICATION NUMBER: US 60/356,714  
; PRIOR FILING DATE: 2002-02-13  
; PRIOR APPLICATION NUMBER: US 60/356,714  
; REMAINING PRIOR APPLICATION data removed - See File Wrapper or PALM.  
; NUMBER OF SEQ ID NOS: 1386  
; SOFTWARE: Patent In Ver. 2.1  
; SEQ ID NO: 787  
; LENGTH: 431  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-295-027-787

Query Match 100.0%; Score 111; DB 14; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCAPTOJLAIS 20  
DB 386 INPETHKPCAPTOJLAIS 405

RESULT 75  
US-10-295-027-806  
; Sequence 806, Application US/10295027  
; Publication No. US2003023350A1  
; GENERAL INFORMATION:  
; APPLICANT: Afar, Daniel  
; APPLICANT: Aziz, Natasha  
; APPLICANT: Ginsberg, Wendy M.  
; APPLICANT: Gish, Kurt C.  
; APPLICANT: Glynn, Richard  
; APPLICANT: Hevez, Peter A.  
; APPLICANT: Mack, David H.  
; APPLICANT: Murray, Richard  
; APPLICANT: Watson, Susan R.  
; APPLICANT: Eos Biotechnology, Inc.

; TITLE OF INVENTION: Methods of Diagnosis of Cancer, Compositions and  
; TITLE OF INVENTION: Methods of Screening for Modulators of Cancer  
; FILE REFERENCE: 018501-012500US  
; CURRENT FILING DATE: 2002-11-13  
; PRIOR FILING DATE: 2002-11-13  
; PRIOR APPLICATION NUMBER: US 09/663,733  
; PRIOR FILING DATE: 2000-09-15  
; PRIOR APPLICATION NUMBER: US 60/350,666  
; PRIOR FILING DATE: 2001-11-13  
; PRIOR APPLICATION NUMBER: US 60/335,394  
; PRIOR FILING DATE: 2001-11-15  
; PRIOR APPLICATION NUMBER: US 60/332,464  
; PRIOR FILING DATE: 2001-11-21  
; PRIOR APPLICATION NUMBER: US 60/334,393  
; PRIOR FILING DATE: 2001-11-29  
; PRIOR APPLICATION NUMBER: US 60/340,376  
; PRIOR FILING DATE: 2001-12-14  
; PRIOR APPLICATION NUMBER: US 60/347,211  
; PRIOR FILING DATE: 2002-01-08  
; PRIOR APPLICATION NUMBER: US 60/355,250  
; PRIOR FILING DATE: 2002-02-08  
; PRIOR APPLICATION NUMBER: US 60/356,714  
; REMAINING PRIOR APPLICATION data removed - See File Wrapper or PALM.  
; NUMBER OF SEQ ID NOS: 1386  
; SOFTWARE: Patent In Ver. 2.1  
; SEQ ID NO: 806  
; LENGTH: 431  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-295-027-806

Query Match 100.0%; Score 111; DB 14; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCAPTOJLAIS 20  
DB 386 INPETHKPCAPTOJLAIS 405

RESULT 76  
US-10-295-027-843  
; Sequence 843, Application US/10295027  
; Publication No. US2003023350A1  
; GENERAL INFORMATION:  
; APPLICANT: Afar, Daniel  
; APPLICANT: Aziz, Natasha  
; APPLICANT: Ginsberg, Wendy M.  
; APPLICANT: Gish, Kurt C.  
; APPLICANT: Glynn, Richard  
; APPLICANT: Hevez, Peter A.  
; APPLICANT: Mack, David H.  
; APPLICANT: Murray, Richard  
; APPLICANT: Watson, Susan R.  
; APPLICANT: Eos Biotechnology, Inc.  
; TITLE OF INVENTION: Methods of Diagnosis of Cancer, Compositions and  
; TITLE OF INVENTION: Methods of Screening for Modulators of Cancer  
; FILE REFERENCE: 018501-012500US  
; CURRENT FILING DATE: 2002-11-13  
; PRIOR FILING DATE: 2002-11-13  
; PRIOR APPLICATION NUMBER: US 09/663,733  
; PRIOR FILING DATE: 2000-09-15  
; PRIOR APPLICATION NUMBER: US 60/350,666  
; PRIOR FILING DATE: 2001-11-13  
; PRIOR APPLICATION NUMBER: US 60/335,394  
; PRIOR FILING DATE: 2001-11-15  
; PRIOR APPLICATION NUMBER: US 60/332,464  
; PRIOR FILING DATE: 2001-11-21  
; PRIOR APPLICATION NUMBER: US 60/334,393  
; PRIOR FILING DATE: 2001-11-29

PRIOR APPLICATION NUMBER: US 60/340,376  
PRIOR FILING DATE: 2001-12-14  
PRIOR APPLICATION NUMBER: US 60/347,211  
PRIOR FILING DATE: 2002-01-08  
PRIOR APPLICATION NUMBER: US 60/347,349  
PRIOR FILING DATE: 2002-01-10  
PRIOR APPLICATION NUMBER: US 60/355,250  
PRIOR FILING DATE: 2002-02-08  
PRIOR APPLICATION NUMBER: US 60/356,714  
PRIOR FILING DATE: 2002-02-13  
Remaining Prior Application data removed - See File Wrapper or PALM.  
NUMBER OF SEQ ID NOS: 1386  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO: 843  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-295-027-843

Query Match 100.0%; Score 111; DB 14; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 77  
US-10-375-150-6  
Sequence 6, Application US/10375150  
Publication No. US20030235888A1  
GENERAL INFORMATION:  
APPLICANT: Israel, David  
APPLICANT: Wolfman, Neil M.  
TITLE OF INVENTION: Recombinant Bone Morphogenetic Protein  
TITLE OF INVENTION: Heterodimers, Compositions and Methods of Use.  
NUMBER OF SEQUENCES: 30  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Legal Affairs, Genetics Institute, Inc.  
STREET: 87 Cambridgepark Drive  
CITY: Cambridge  
STATE: MA  
COUNTRY: USA  
ZIP: 02140-2387  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Tape  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/375,150  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/07/989,847  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: Kapinos, Ellen J.  
REGISTRATION NUMBER: 32,245  
REFERENCE/DOCKET NUMBER: GI-51928  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-876-1170  
TELEFAX: 617-876-5851  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-10-375-150-6

Query Match 100.0%; Score 111; DB 14; Length 431;

Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 78  
US-10-173-999-58  
Sequence 58, Application US/10173999  
Publication No. US20040005563A1  
GENERAL INFORMATION:  
APPLICANT: Mack, David H.  
APPLICANT: Gish, Kurt C.  
APPLICANT: Eos Biotechnology, Inc.  
TITLE OF INVENTION: Methods of Diagnosis of Ovarian Cancer, Compositions  
TITLE OF INVENTION: and Methods of Screening for Modulators of Ovarian  
FILE REFERENCE: 018501-002420US  
CURRENT APPLICATION NUMBER: US/10/173,999  
CURRENT FILING DATE: 2002-06-17  
PRIOR APPLICATION NUMBER: US 60/299,234  
PRIOR FILING DATE: 2001-06-18  
PRIOR APPLICATION NUMBER: US 60/315,287  
PRIOR FILING DATE: 2001-08-27  
PRIOR APPLICATION NUMBER: US 60/350,666  
PRIOR FILING DATE: 2001-11-13  
PRIOR APPLICATION NUMBER: US 60/372,246  
PRIOR FILING DATE: 2001-04-12  
NUMBER OF SEQ ID NOS: 163  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO: 58  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-173-999-58

Query Match 100.0%; Score 111; DB 15; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 79  
US-10-428-275-6  
Sequence 6, Application US/10428275  
Publication No. US20040067505A1  
GENERAL INFORMATION:  
APPLICANT: Alvarez et al.  
TITLE OF INVENTION: THERAPEUTIC POLYPEPTIDES, NUCLEIC ACIDS ENCODING SAME, AND METHODS  
FILE REFERENCE: 21402-585  
CURRENT APPLICATION NUMBER: US/10/428,275  
CURRENT FILING DATE: 2003-05-01  
PRIOR APPLICATION NUMBER: 09/966545  
PRIOR FILING DATE: 2001-09-26  
PRIOR APPLICATION NUMBER: 09/544511  
PRIOR FILING DATE: 2000-04-06  
PRIOR APPLICATION NUMBER: 60/128514  
PRIOR FILING DATE: 1999-04-09  
PRIOR APPLICATION NUMBER: 09/569269  
PRIOR FILING DATE: 2000-05-11  
PRIOR APPLICATION NUMBER: 60/134315  
PRIOR FILING DATE: 1999-05-14  
PRIOR APPLICATION NUMBER: 09/619252  
PRIOR FILING DATE: 2000-07-19  
PRIOR APPLICATION NUMBER: 09/789390  
PRIOR FILING DATE: 2001-02-23  
PRIOR APPLICATION NUMBER: 60/185548  
PRIOR FILING DATE: 2000-02-25



NUMBER OF SEQ ID NOS: 450  
SOFTWARE: CuraseqList version 0.1  
SEQ ID NO 6  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-428-275-6

Query Match 100.0%; Score 111; DB 15; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INETVPRCCAPTOLNAIS 20  
DB 386 INETVPRCCAPTOLNAIS 405

RESULT 80  
US-10-428-997A-2  
Sequence 2, Application US/10428997A  
Publication No. US2004007546A1  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/428,997A  
FILING DATE: 02-May-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/957,425  
FILING DATE: 24-OCT-1997  
APPLICATION NUMBER: US 08/447,570  
FILING DATE: 23-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913

FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,659  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: BRIAN FAIRCHILD  
REGISTRATION NUMBER: 48,645  
REFERENCE/DOCKET NUMBER: STK-015C1  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-10-428-997A-2

Query Match 100.0%; Score 111; DB 15; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INETVPRCCAPTOLNAIS 20  
DB 386 INETVPRCCAPTOLNAIS 405

RESULT 81  
US-10-302-812-28  
Sequence 28, Application US/10302812  
Publication No. US20040087016A1  
GENERAL INFORMATION:  
APPLICANT: Keating et al.  
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR CELL DIFFERENTIATION AND  
FILE REFERENCE: HYDR-P02-004  
CURRENT APPLICATION NUMBER: US/10/302,812  
CURRENT FILING DATE: 2002-11-21  
NUMBER OF SEQ ID NOS: 78  
SOFTWARE: Patent version 3.1  
SEQ ID NO 28  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-302-812-28

Query Match 100.0%; Score 111; DB 15; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INETVPRCCAPTOLNAIS 20  
DB 386 INETVPRCCAPTOLNAIS 405

RESULT 82  
US-10-290-554-1  
Sequence 1, Application US/10290554  
Publication No. US20040093164A1  
GENERAL INFORMATION:

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; APPLICANT: Carlson, William D
; APPLICANT: Kech, Peter C
; TITLE OF INVENTION: COMPUTER SYSTEM AND METHODS FOR PRODUCING MORPHOGEN
; TITLE OF INVENTION: ANALOGS OF HUMAN TGF-1
; FILE REFERENCE: 24661-501
; CURRENT APPLICATION NUMBER: US/10/290,554
; CURRENT FILING DATE: 2002-11-08
; NUMBER OF SEQ ID NOS: 1
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO: 1
; LENGTH: 431
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-290-554-1

Query Match          100.0%; Score 111; DB 15; Length 431;
Best Local Similarity 100.0%; Pred. No. 1.5e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQLNALS 20
Db 386 INPETHKPCCAPTQLNALS 405

RESULT 83
US-10-753-916-2
; Sequence 2, Application US/10753916
; Publication No. US20040138128A1
; GENERAL INFORMATION:
; APPLICANT: LEE, JOHN C.
; APPLICANT: YEH, LEE-CHUAN C.
; TITLE OF INVENTION: COMPOSITIONS AND THERAPEUTIC METHODS USING MORPHOGENIC
; TITLE OF INVENTION: PROTEINS, HORMONES AND HORMONE RECEPTORS
; FILE REFERENCE: STX-4
; CURRENT APPLICATION NUMBER: US/10/753,916
; CURRENT FILING DATE: 2004-01-07
; PRIOR APPLICATION NUMBER: US/09/672,224A
; PRIOR FILING DATE: 2000-09-27
; PRIOR APPLICATION NUMBER: 60/156,261
; PRIOR FILING DATE: 1999-09-27
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO: 2
; LENGTH: 431
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-753-916-2

Query Match          100.0%; Score 111; DB 16; Length 431;
Best Local Similarity 100.0%; Pred. No. 1.5e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQLNALS 20
Db 386 INPETHKPCCAPTQLNALS 405

RESULT 84
US-09-361-741-3
; Sequence 3, Application US/09361741
; Patent No. US20020048784A1
; GENERAL INFORMATION:
; APPLICANT: HUDSON, PETER L
; APPLICANT: ROSEN, CRAIG A
; APPLICANT: HE, WEI WU
; TITLE OF INVENTION: PROSTATIC GROWTH FACTOR
; NUMBER OF SEQUENCES: 10
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILLAN, CECCHI,
; ADDRESSEE: STEWART & OLSTEIN
; STREET: 6 BECKER FARM ROAD
; CITY: ROSELAND
; STATE: NJ
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; COUNTRY: US
; ZIP: 07068
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/361,741
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/411,607
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: FERRARO, GREGORY D
; REGISTRATION NUMBER: 36,134
; REFERENCE/DOCKET NUMBER: 325800-329
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 994-1700
; TELEFAX: (201) 994-1744
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 432 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-361-741-3

Query Match          100.0%; Score 111; DB 9; Length 432;
Best Local Similarity 100.0%; Pred. No. 1.5e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQLNALS 20
Db 387 INPETHKPCCAPTQLNALS 406

RESULT 85
US-10-270-377-3
; Sequence 3, Application US/10270377
; Publication No. US20030059431A1
; GENERAL INFORMATION:
; APPLICANT: Hudson, et al.
; TITLE OF INVENTION: Prostatic Growth Factor
; FILE REFERENCE: PFI49D2
; CURRENT APPLICATION NUMBER: US/10/270,377
; CURRENT FILING DATE: 2002-10-15
; PRIOR APPLICATION NUMBER: 09/361,741
; PRIOR FILING DATE: 1999-07-28
; PRIOR APPLICATION NUMBER: 09/461,418
; PRIOR FILING DATE: 1999-11-18
; PRIOR APPLICATION NUMBER: 08/411,607
; PRIOR FILING DATE: 1995-04-11
; PRIOR APPLICATION NUMBER: US94/14578
; PRIOR FILING DATE: 1994-12-15
; NUMBER OF SEQ ID NOS: 10
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO: 3
; LENGTH: 432
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-270-377-3

Query Match          100.0%; Score 111; DB 14; Length 432;
Best Local Similarity 100.0%; Pred. No. 1.5e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQLNALS 20
Db 387 INPETHKPCCAPTQLNALS 406
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Tue Oct 26 09:17:06 2004

us-10-619-910-11.oct24.rapb

Page 33

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RESULT 86
US-08-957-425-13
; Sequence 13, Application US/08957425
; Publication No. US200306940.1A1
GENERAL INFORMATION:
APPLICANT: OPPERMAN, HERMANN
OZKAYNAK, ENGIN
KUBERASAMPATH, THANGAVEL
RUEGER, DAVID C.
PANG, ROY H.L.
TITLE OF INVENTION: OSTEOGENIC DEVICES
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
ADDRESSEE: TESTA, HURWITZ & THIBEAULT
STREET: 53 STATE STREET
CITY: BOSTON
STATE: MASSACHUSETTS
COUNTRY: U.S.A.
ZIP: 02109
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/957,425
FILING DATE: 24-Oct-1997
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/447,570
FILING DATE: 21-FEB-1992
APPLICATION NUMBER: US 810,560
FILING DATE: 20-DEC-1991
APPLICATION NUMBER: US 827,052
FILING DATE: 28-JAN-1992
APPLICATION NUMBER: US 660,162
FILING DATE: 22-FEB-1991
APPLICATION NUMBER: US 621,988
FILING DATE: 04-DEC-1990
APPLICATION NUMBER: US 621,849
FILING DATE: 04-DEC-1990
APPLICATION NUMBER: US 616,374
FILING DATE: 21-NOV-1990
APPLICATION NUMBER: US 600,024
FILING DATE: 18-OCT-1990
APPLICATION NUMBER: US 599,543
FILING DATE: 18-OCT-1990
APPLICATION NUMBER: US 579,865
FILING DATE: 07-SEP-1990
APPLICATION NUMBER: US 569,920
FILING DATE: 20-AUG-1990
APPLICATION NUMBER: US 483,913
FILING DATE: 22-FEB-1990
APPLICATION NUMBER: US 422,613
FILING DATE: 17-OCT-1989
APPLICATION NUMBER: US 315,342
FILING DATE: 23-FEB-1989
APPLICATION NUMBER: US 232,630
FILING DATE: 15-AUG-1988
APPLICATION NUMBER: US 179,460
FILING DATE: 08-APR-1988
ATTORNEY/AGENT INFORMATION:
NAME: FITCHER, EDWARD R.
REGISTRATION NUMBER: 27,829
REFERENCE/DOCKET NUMBER: CRP-001CP6
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617/248-7000
TELEFAX: 617/248-7100
INFORMATION FOR SEQ ID NO: 13:
SEQUENCE CHARACTERISTICS:
LENGTH: 484 amino acids
TYPE: amino acid
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; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 13:
US-08-957-425-13
Query Match 100.0%; Score 111; DB 8; Length 484;
Best Local Similarity 100.0%; Pred. No. 1.6e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 IMPETVPCPCAPITQNAIS 20
DB 439 IMPETVPCPCAPITQNAIS 458
RESULT 87
US-10-321-799-13
; Sequence 13, Application US/10321799
; Publication No. US2003022496A1
GENERAL INFORMATION:
APPLICANT: OPPERMAN, HERMANN
OZKAYNAK, ENGIN
KUBERASAMPATH, THANGAVEL
RUEGER, DAVID C.
PANG, ROY H.L.
TITLE OF INVENTION: OSTEOGENIC DEVICES
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
ADDRESSEE: TESTA, HURWITZ & THIBEAULT
STREET: 125 HIGH STREET
CITY: BOSTON
STATE: MASSACHUSETTS
COUNTRY: U.S.A.
ZIP: 02110
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/321,799
FILING DATE: 17-Dec-2002
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 09/148,925
FILING DATE: 8-SEP-1998
APPLICATION NUMBER: US 08/449,699
FILING DATE: 24-MAY-1995
APPLICATION NUMBER: US 08/147,023
FILING DATE: 1-NOV-1993
APPLICATION NUMBER: US 07/841,646
FILING DATE: 21-FEB-1992
APPLICATION NUMBER: US 07/827,052
FILING DATE: 28-JAN-1992
APPLICATION NUMBER: US 07/579,865
FILING DATE: 7-SEP-1990
APPLICATION NUMBER: US 07/621,849
FILING DATE: 4-DEC-1990
APPLICATION NUMBER: US 07/621,988
FILING DATE: 4-DEC-1990
APPLICATION NUMBER: US 07/810,560
FILING DATE: 20-DEC-1991
APPLICATION NUMBER: US 07/569,920
FILING DATE: 20-AUG-1990
APPLICATION NUMBER: US 07/600,024
FILING DATE: 18-OCT-1990
APPLICATION NUMBER: US 07/599,543
FILING DATE: 18-OCT-1990
APPLICATION NUMBER: US 07/616,374
FILING DATE: 21-NOV-1990
APPLICATION NUMBER: US 07/483,913
FILING DATE: 22-FEB-1990
APPLICATION NUMBER: US 07/179,406
FILING DATE: 08-APR-1988
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APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: DIANA M. STEEL  
REGISTRATION NUMBER: 43,153  
REFERENCE/DOCKET NUMBER: STR-001CP6C3  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 484 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 13:  
US-10-321-799-13

Query Match 100.0%; Score 111; DB 14; Length 484;  
Best Local Similarity 100.0%; Pred. No. 1.6e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy 1 INPETHPCCAPTOLNAIS 20  
Db 439 INPETHPCCAPTOLNAIS 458

RESULT 88  
US-10-428-997A-13  
Sequence 13, Application US/10428997A  
Publication No. US2004007546A1  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/428,997A  
FILING DATE: 02-May-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/957,425  
FILING DATE: 24-OCT-1997  
APPLICATION NUMBER: US 08/447,570  
FILING DATE: 23-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646

FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 29-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: BRIAN FAIRCHILD  
REGISTRATION NUMBER: 48,645  
REFERENCE/DOCKET NUMBER: STR-015C1  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 484 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 13:  
US-10-428-997A-13

Query Match 100.0%; Score 111; DB 15; Length 484;  
Best Local Similarity 100.0%; Pred. No. 1.6e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy 1 INPETHPCCAPTOLNAIS 20  
Db 439 INPETHPCCAPTOLNAIS 458

RESULT 89  
US-08-260-675-6  
Sequence 6, Application US/08260675  
Publication No. US2003010493A1  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C  
KUBERASAMPATH, THANGAVEL  
APPLICANT: OPPERMAN, HERMANN  
OZKAYNAK, ENGIN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M  
TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
REPAIR

NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA HURWITZ & THIBEAULT  
STREET: 55 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02140  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/260,675  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/126,100  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/07/922,813  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-070  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
ORIGINAL SOURCE:  
ORGANISM: MURIDAE  
TISSUE TYPE: EMBRYO  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /label= MOP1-MATURE  
US-08-260-675-6  
Query Match 97.3%; Score 108; DB 8; Length 139;  
Best Local Similarity 95.0%; Pred. No. 1.2e-06;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPDTVPKPCAPTOQLNAIS 20  
DB 94 INPDTVPKPCAPTOQLNAIS 113

RESULT 90  
US-09-952-318A-6  
Sequence 6, Application US/09952318A  
Publication No. US20030224979A1  
GENERAL INFORMATION:  
APPLICANT: Kuberamath et al.  
TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR INCREASE BONE MASS IN  
FILE REFERENCE: JCU-P06-522  
CURRENT APPLICATION NUMBER: US/09/952,318A  
CURRENT FILING DATE: 2001-09-13  
PRIOR APPLICATION NUMBER: 09/170,936

PRIOR FILING DATE: 1998-10-13  
PRIOR APPLICATION NUMBER: 08/432,883  
PRIOR FILING DATE: 1995-05-02  
PRIOR APPLICATION NUMBER: 08/115,914  
PRIOR FILING DATE: 1993-09-01  
PRIOR APPLICATION NUMBER: 07/923,780  
PRIOR FILING DATE: 1992-07-31  
PRIOR APPLICATION NUMBER: 07/752,847  
PRIOR FILING DATE: 1991-08-30  
PRIOR APPLICATION NUMBER: 07/667,274  
PRIOR FILING DATE: 1991-03-11  
NUMBER OF SEQ ID NOS: 33  
SOFTWARE: Patentin version 3.1  
SEQ ID NO 6  
LENGTH: 139  
TYPE: PRT  
ORGANISM: Mus musculus  
US-09-952-318A-6  
Query Match 97.3%; Score 108; DB 10; Length 139;  
Best Local Similarity 95.0%; Pred. No. 1.2e-06;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPDTVPKPCAPTOQLNAIS 20  
DB 94 INPDTVPKPCAPTOQLNAIS 113

RESULT 91  
US-10-050-050-6  
Sequence 6, Application US/10050050  
Publication No. US20030125230A1  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M.  
CHARRETTE, MARC F.  
KUBERAMATH, THANGAVEL  
RUDGER, DAVID C.  
OPPERMANN, HERMANN  
PANG, ROY H.L.  
OKAYNAK, ENGIN  
SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING  
PROLIFERATION OF EPITHELIAL CELLS.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/050,050  
FILING DATE: 15-Jan-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/461,113  
FILING DATE: <Unknown>  
APPLICATION NUMBER: US 08/445,882  
FILING DATE: 22-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON ESQ., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-074DV  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 6:

## SEQUENCE CHARACTERISTICS:

LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:

NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION:

SEQUENCE DESCRIPTION: SEQ ID NO: 6;  
US-10-050-050-6

Query Match 97.3%; Score 108; DB 14; Length 139;  
Best Local Similarity 95.0%; Pred. No. 1.2e-06;

Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPDTVPKPCCAPTOLNAIS 20  
Db 94 INPDTVPKPCCAPTOLNAIS 113

RESULT 92

US-10-385-064-6

Sequence 6, Application US/10385064

Publication No. US20040102373A1

GENERAL INFORMATION:

APPLICANT: Cohen, Charles M.

APPLICANT: Kuberassampath, Thangavel

APPLICANT: Oppermann, Hermann

APPLICANT: Rueger, David C.

TITLE OF INVENTION: Protein Induced Morphogenesis

FILE REFERENCE: CBM-2 DIV (00960-502 DIV)

CURRENT APPLICATION NUMBER: US/10385,064

CURRENT FILING DATE: 2003-03-10

PRIOR APPLICATION NUMBER: US/09/464,206

PRIOR FILING DATE: 1999-12-15

PRIOR APPLICATION NUMBER: 08/396,684

PRIOR FILING DATE: 1995-03-01

NUMBER OF SEQ ID NOS: 16

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 6

LENGTH: 139

TYPE: PRT

ORGANISM: Murinae gen. sp.

FEATURE:

OTHER INFORMATION: tissue type embryo MOP1-MATURE

US-10-385-064-6

Query Match

Best Local Similarity 97.3%; Score 108; DB 16; Length 139;

Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPDTVPKPCCAPTOLNAIS 20  
Db 94 INPDTVPKPCCAPTOLNAIS 113

RESULT 93

US-08-957-425-25

Sequence 25, Application US/08957425

Publication No. US2003006940A1

GENERAL INFORMATION:

APPLICANT: Oppermann, Hermann

APPLICANT: OZKAYNAK, ENGIN

APPLICANT: KUBERASSAMPATH, THANGAVEL

APPLICANT: RUEGER, DAVID C.

APPLICANT: PANG, ROY H.L.

TITLE OF INVENTION: OSTEOGENIC DEVICES

NUMBER OF SEQUENCES: 33

CORRESPONDENCE ADDRESS:

ADDRESSEE: TESTA, HURWITZ & TRIBEAULT

STREET: 53 STATE STREET

CITY: BOSTON  
STATE: MASSACHUSETTS

COUNTRY: U.S.A.

ZIP: 02109

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/957,425

FILING DATE: 24-Oct-1997

CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/447,570

FILING DATE: 21-FEB-1992

APPLICATION NUMBER: US 810,560

FILING DATE: 20-DEC-1991

APPLICATION NUMBER: US 827,052

FILING DATE: 28-JAN-1992

APPLICATION NUMBER: US 660,162

FILING DATE: 22-FEB-1991

APPLICATION NUMBER: US 621,988

FILING DATE: 04-DEC-1990

APPLICATION NUMBER: US 621,849

FILING DATE: 04-DEC-1990

APPLICATION NUMBER: US 616,374

FILING DATE: 21-NOV-1990

APPLICATION NUMBER: US 600,024

FILING DATE: 18-OCT-1990

APPLICATION NUMBER: US 599,543

FILING DATE: 18-OCT-1990

APPLICATION NUMBER: US 579,865

FILING DATE: 07-SEP-1990

APPLICATION NUMBER: US 569,920

FILING DATE: 20-AUG-1990

APPLICATION NUMBER: US 483,913

FILING DATE: 22-FEB-1990

APPLICATION NUMBER: US 422,613

FILING DATE: 17-OCT-1989

APPLICATION NUMBER: US 315,342

FILING DATE: 23-FEB-1989

APPLICATION NUMBER: US 232,630

FILING DATE: 15-AUG-1988

APPLICATION NUMBER: US 179,460

FILING DATE: 08-APR-1988

ATTORNEY/AGENT INFORMATION:

NAME: PITCHER, EDMUND R.

REGISTRATION NUMBER: 27,829

REFERENCE/DOCKET NUMBER: CRP-001CP6

TELECOMMUNICATION INFORMATION:

TELEPHONE: 617/248-7000

TELEFAX: 617/248-7100

INFORMATION FOR SEQ ID NO: 25:

SEQUENCE CHARACTERISTICS:

LENGTH: 430 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 25;

US-08-957-425-25

Query Match 97.3%; Score 108; DB 8; Length 430;  
Best Local Similarity 95.0%; Pred. No. 3.6e-06;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPDTVPKPCCAPTOLNAIS 20  
Db 385 INPDTVPKPCCAPTOLNAIS 404

RESULT 94  
US-08-260-675-19

Tue Oct 26 09:17:06 2004

us-10-619-910-11.oct24.rapb

Page 37

Sequence 19, Application US/08260675  
Publication No. US20030104993A1  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OKAYNAK, ENGIN  
APPLICANT: PANG, ROY HL  
TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
TITLE OF INVENTION: REPAIR  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA HURWITZ & THIBEAULT  
STREET: 55 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02140  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/260,675  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/126,100  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/07/922,813  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
APPLICATION DATA: US 07/752,764  
FILING DATE: 30-AUG-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-070  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 19:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 430 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-260-675-19  
Query Match 97.3%; Score 108; DB 8; Length 430;  
Best Local Similarity 95.0%; Pred. No. 3.6e-06;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
CY 1 INPETHPCCAPTOLNAIS 20  
DB 385 INPETHPCCAPTOLNAIS 404  
RESULT 95  
US-09-952-318A-19  
Sequence 19, Application US/09952318A  
Publication No. US20030224979A1  
GENERAL INFORMATION:  
APPLICANT: Kuberampath et al.  
TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR INCREASE BONE MASS IN  
TITLE OF INVENTION: METABOLIC BONE DISEASE  
FILE REFERENCE: JJJ-P06-522

CURRENT APPLICATION NUMBER: US/09/952,318A  
CURRENT FILING DATE: 2001-09-13  
PRIOR APPLICATION NUMBER: 09/170,936  
PRIOR FILING DATE: 1998-10-13  
PRIOR APPLICATION NUMBER: 08/432,883  
PRIOR FILING DATE: 1995-05-02  
PRIOR APPLICATION NUMBER: 08/115,914  
PRIOR FILING DATE: 1993-09-01  
PRIOR APPLICATION NUMBER: 07/923,780  
PRIOR FILING DATE: 1992-07-31  
PRIOR APPLICATION NUMBER: 07/752,847  
PRIOR FILING DATE: 1991-08-30  
PRIOR APPLICATION NUMBER: 07/667,274  
PRIOR FILING DATE: 1991-03-11  
NUMBER OF SEQ ID NOS: 33  
SOFTWARE: Patentin version 3.1  
SEQ ID NO 19  
LENGTH: 430  
TYPE: PRT  
ORGANISM: Mus musculus  
US-09-952-318A-19  
Query Match 97.3%; Score 108; DB 10; Length 430;  
Best Local Similarity 95.0%; Pred. No. 3.6e-06;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
CY 1 INPETHPCCAPTOLNAIS 20  
DB 385 INPETHPCCAPTOLNAIS 404  
RESULT 96  
US-10-122-026-4  
Sequence 4, Application US/10122026  
Publication No. US20030105004A1  
GENERAL INFORMATION:  
APPLICANT: JONES, WILLIAM K  
TUCKER, RONALD F  
RUEGER, DAVID C  
OPPERMAN, HERMANN  
OKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
TITLE OF INVENTION: NOVEL MORPHOGENIC PROTEIN COMPOSITIONS  
OF MATTER  
NUMBER OF SEQUENCES: 23  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Patent Administrator, Testa, Hurwitz &  
Thibault, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/122,026  
FILING DATE: 29-AUG-2002  
CLASSIFICATION: <unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/402,542  
FILING DATE: 13-MAR-1995  
APPLICATION NUMBER: US 08/840,510  
FILING DATE: 31-MAR-1993  
APPLICATION NUMBER: US 08/029,335  
FILING DATE: 04-MAR-1993  
APPLICATION NUMBER: US 07/971,091  
FILING DATE: 03-NOV-1992  
APPLICATION NUMBER: US 07/946,235  
FILING DATE: 16-SEP-1992

APPLICATION NUMBER: US 07/938,336  
FILING DATE: 28-AUG-1992  
APPLICATION NUMBER: US 07/923,780  
FILING DATE: 31-JUL-1992  
APPLICATION NUMBER: US 07/752,857  
FILING DATE: 30-AUG-1991  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: CAMACHO, JENNIFER A.  
REGISTRATION NUMBER: 43,526  
REFERENCE/DOCKET NUMBER: STR-060CN  
INFORMATION FOR SEQ ID NO: 4:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 430 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 4:  
US-10-122-026-4

Query Match 97.3%; Score 108; DB 14; Length 430;  
Best Local Similarity 95.0%; Pred. No. 3.6e-06;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPVTVPKCCAPTOLNALS 20  
Db 385 INPVTVPKCCAPTOLNALS 404

RESULT 97  
US-10-050-050-19  
Sequence 19, Application US/10050050  
Publication No. US20030125230A1  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M.  
CHARLETTE, MARC F.  
KUBERASAMPATH, THANCAVEL  
RUEGER, DAVID C.  
OPPERMANN, HERMANN  
PANG, ROY H.L.  
OKAYNAK, ENGIN  
SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING  
PROLIFERATION OF EPITHELIAL CELLS.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/050,050  
FILING DATE: 15-Jan-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/461,113  
FILING DATE: <Unknown>  
APPLICATION NUMBER: US 08/445,882  
FILING DATE: 22-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON EGG, GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-074DV

TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 19:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 430 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 19:  
US-10-050-050-19

Query Match 97.3%; Score 108; DB 14; Length 430;  
Best Local Similarity 95.0%; Pred. No. 3.6e-06;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPVTVPKCCAPTOLNALS 20  
Db 385 INPVTVPKCCAPTOLNALS 404

RESULT 98  
US-10-321-799-25  
Sequence 25, Application US/10321799  
Publication No. US2003022496A1  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
KUBERASAMPATH, THANCAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/321,799  
FILING DATE: 17-Dec-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 09/148,925  
FILING DATE: 8-SEP-1998  
APPLICATION NUMBER: US 08/449,699  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543



FILED DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: DIANA M. STEEL  
REGISTRATION NUMBER: 43,153  
REFERENCE/DOCKET NUMBER: STK-001CP6C3  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 25:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 430 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 25:  
US-10-321-799-25  
Query Match 97.3%; Score 108; DB 14; Length 430;  
Best Local Similarity 95.0%; Pred. No. 3.6e-06;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
Cy 1 INPDTVPKPCCAPTOLNAIS 20  
Db 385 INPDTVPKPCCAPTOLNAIS 404  
RESULT 99  
US-10-428-997A-25  
Sequence 25, Application US/10428997A  
Publication No. US20040077546A1  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H. L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/428,997A  
FILING DATE: 02-May-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/957,425  
FILING DATE: 24-OCT-1997  
APPLICATION NUMBER: US 08/447,570  
FILING DATE: 23-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1993  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: BRIAN FAIRCHILD  
REGISTRATION NUMBER: 48,645  
REFERENCE/DOCKET NUMBER: STK-015C1  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 25:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 430 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 25:  
US-10-428-997A-25  
Query Match 97.3%; Score 108; DB 15; Length 430;  
Best Local Similarity 95.0%; Pred. No. 3.6e-06;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
Cy 1 INPDTVPKPCCAPTOLNAIS 20  
Db 385 INPDTVPKPCCAPTOLNAIS 404  
RESULT 100  
US-10-302-812-26  
Sequence 26, Application US/10302812  
Publication No. US20040087016A1  
GENERAL INFORMATION:  
APPLICANT: Keating et al.

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; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR CELL DEDIFFERENTIATION AND
; FILE REFERENCE: TISSUE REGENERATION
; CURRENT APPLICATION NUMBER: US/10/302,812
; CURRENT FILING DATE: 2002-11-21
; NUMBER OF SEQ ID NOS: 78
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 26
; LENGTH: 430
; TYPE: PRT
; ORGANISM: Mus musculus
US-10-302-812-26

Query Match      97.3%; Score 108; DB 15; Length 430;
Best Local Similarity 95.0%; Pred. No. 3.6e-06;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Cy 1 INPETHKPCCAPTOLNAIS 20
Db 385 INPETHKPCCAPTOLNAIS 404

RESULT 101
US-10-385-064-16
; Sequence 16, Application US/10385064
; Publication No. US20040102373A1
; GENERAL INFORMATION:
; APPLICANT: Cohen, Charles M.
; APPLICANT: Kuderampach, Thangavel
; APPLICANT: Oppermann, Hermann
; APPLICANT: Rueger, David C.
; TITLE OF INVENTION: Protein Induced Morphogenesis
; FILE REFERENCE: CSM-2 DIV (00960-502 DIV)
; CURRENT APPLICATION NUMBER: US/10/385,064
; CURRENT FILING DATE: 2003-03-10
; PRIOR APPLICATION NUMBER: US/09/464,206
; PRIOR FILING DATE: 1999-12-15
; PRIOR APPLICATION NUMBER: 08/396,684
; PRIOR FILING DATE: 1995-03-01
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 16
; LENGTH: 430
; TYPE: PRT
; ORGANISM: Murinae Gen. sp.
US-10-385-064-16

Query Match      97.3%; Score 108; DB 16; Length 430;
Best Local Similarity 95.0%; Pred. No. 3.6e-06;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Cy 1 INPETHKPCCAPTOLNAIS 20
Db 385 INPETHKPCCAPTOLNAIS 404

RESULT 102
US-09-784-911-12
; Sequence 12, Application US/09784911
; Patent No. US20020072115A1
; GENERAL INFORMATION:
; APPLICANT: Harrison, Leonard C.
; APPLICANT: Uiang, Fang-Xu
; APPLICANT: Stanley, Edouard Guy
; APPLICANT: Gonzalez, Leonel Jorge
; TITLE OF INVENTION: Pancreatic islet cell growth factors
; FILE REFERENCE: Davies Collision Cave
; CURRENT APPLICATION NUMBER: US/09/784,911
; CURRENT FILING DATE: 2001-09-17
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: PatentIn version 2.1
; SEQ ID NO 12
; LENGTH: 433
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; TYPE: PRT
; ORGANISM: mouse
US-09-784-911-12

Query Match      97.3%; Score 108; DB 9; Length 433;
Best Local Similarity 95.0%; Pred. No. 3.6e-06;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Cy 1 INPETHKPCCAPTOLNAIS 20
Db 388 INPETHKPCCAPTOLNAIS 407

RESULT 103
US-09-784-911-14
; Sequence 14, Application US/09784911
; Patent No. US20020072115A1
; GENERAL INFORMATION:
; APPLICANT: Harrison, Leonard C.
; APPLICANT: Uiang, Fang-Xu
; APPLICANT: Stanley, Edouard Guy
; APPLICANT: Gonzalez, Leonel Jorge
; TITLE OF INVENTION: Pancreatic islet cell growth factors
; FILE REFERENCE: Davies Collision Cave
; CURRENT APPLICATION NUMBER: US/09/784,911
; CURRENT FILING DATE: 2001-09-17
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: PatentIn version 2.1
; SEQ ID NO 14
; LENGTH: 435
; TYPE: PRT
; ORGANISM: mouse
US-09-784-911-14

Query Match      97.3%; Score 108; DB 9; Length 435;
Best Local Similarity 95.0%; Pred. No. 3.7e-06;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Cy 1 INPETHKPCCAPTOLNAIS 20
Db 390 INPETHKPCCAPTOLNAIS 409

RESULT 104
US-10-367-094-168
; Sequence 168, Application US/10367094
; Publication No. US20040170982A1
; GENERAL INFORMATION:
; APPLICANT: David W. Morris
; APPLICANT: Marc Malandro
; TITLE OF INVENTION: Novel Therapeutic Targets in Cancer
; FILE REFERENCE: 529452001500
; CURRENT APPLICATION NUMBER: US/10/367,094
; CURRENT FILING DATE: 2003-02-14
; NUMBER OF SEQ ID NOS: 203
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 168
; LENGTH: 456
; TYPE: PRT
; ORGANISM: Mus musculus
US-10-367-094-168

Query Match      97.3%; Score 108; DB 16; Length 456;
Best Local Similarity 95.0%; Pred. No. 3.8e-06;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Cy 1 INPETHKPCCAPTOLNAIS 20
Db 411 INPETHKPCCAPTOLNAIS 430

RESULT 105
US-10-122-026-14
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Tue Oct 26 09:17:06 2004

us-10-619-910-11.oct24.rapb

Page 41

Sequence 14, Application US/10122026  
Publication No. US20030105004A1  
GENERAL INFORMATION:  
APPLICANT: JONES, WILLIAM K  
TUCKER, RONALD F  
RUEGER, DAVID C  
OPPERMANN, HERMANN  
OKRAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
TITLE OF INVENTION: NOVEL MORPHOGENIC PROTEIN COMPOSITIONS  
OF NATTER  
NUMBER OF SEQUENCES: 23  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Patent Administrator, Testa, Hurwitz &  
Thibault, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: FLOPPY disk  
OPERATING SYSTEM: IBM PC compatible  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/122,026  
FILING DATE: 29-AUG-2002  
CLASSIFICATION: <unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/402,542  
FILING DATE: 13-MAR-1995  
APPLICATION NUMBER: US 08/840,510  
FILING DATE: 31-MAR-1993  
APPLICATION NUMBER: US 08/029,335  
FILING DATE: 04-MAR-1993  
APPLICATION NUMBER: US 07/971,091  
FILING DATE: 03-NOV-1992  
APPLICATION NUMBER: US 07/946,235  
FILING DATE: 16-SEP-1992  
APPLICATION NUMBER: US 07/938,336  
FILING DATE: 28-AUG-1992  
APPLICATION NUMBER: US 07/923,780  
FILING DATE: 31-JUL-1992  
APPLICATION NUMBER: US 07/752,857  
FILING DATE: 30-AUG-1991  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: CAMACHO, JENNIFER A.  
REGISTRATION NUMBER: 43,526  
REFERENCE/DOCKET NUMBER: STR-060CN  
INFORMATION FOR SEQ ID NO: 14:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 438 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..438  
OTHER INFORMATION: /note= "PRR-PRO-VGR1"  
PUBLICATION INFORMATION:  
AUTHORS: LYONS, Natl. Acad. Sci. U.S.A.  
VOLUME: 86  
PAGES: 4554-4558  
DATE: 1989  
SEQUENCE DESCRIPTION: SEQ ID NO: 14:  
US-10-122-026-14

Query Match 93.7%; Score 104; DB 14; Length 438;  
Best Local Similarity 90.0%; Pred. No. 1.2e-05;  
Matches 18; Conservative 2; Mismatches 0; Indels 0; Gaps 0;  
DB 393 MNPETVPRCCAPTKLNLS 412  
QY 1 INPETYPRCCAPTKLNLS 20  
:|||||:|||||:|||||  
DB 393 MNPETVPRCCAPTKLNLS 412  
RESULT 106  
US-10-029-386-29756  
Sequence 29756, Application US/10029386  
Publication No. US20030194704A1  
GENERAL INFORMATION:  
APPLICANT: Penn, Sharon G.  
APPLICANT: Rank, David R.  
APPLICANT: Hanzel, David K.  
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR G  
FILE REFERENCE: AEMICA-X-2  
CURRENT APPLICATION NUMBER: US/10/029,386  
CURRENT FILING DATE: 2001-12-20  
NUMBER OF SEQ ID NOS: 34288  
SOFTWARE: Anomax Sequence Listing Engine vers. 1.1.  
SEQ ID NO 29756  
LENGTH: 49  
TYPE: PRT  
ORGANISM: Homo sapiens  
FEATURE:  
OTHER INFORMATION: MAP TO CHR6.1  
OTHER INFORMATION: EXPRESSED IN ADULT LIVER, SIGNAL = 2  
OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 1.6  
OTHER INFORMATION: EXPRESSED IN FETAL LIVER, SIGNAL = 1.2  
OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 1.4  
OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL = 0.91  
OTHER INFORMATION: EXPRESSED IN HEART, SIGNAL = 0.87  
OTHER INFORMATION: SWISSPROT HIT: P20722, EVALU6 6.00e-24  
US-10-029-386-29756  
Query Match 87.4%; Score 97; DB 14; Length 49;  
Best Local Similarity 85.0%; Pred. No. 1.3e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;  
QY 1 INPETYPRCCAPTKLNLS 20  
:|||||:|||||:|||||  
DB 5 MNPETYPRCCAPTKLNLS 24  
RESULT 107  
US-08-260-675-28  
Sequence 28, Application US/08260675  
Publication No. US20030104993A1  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: OPPERMANN, HERMANN  
APPLICANT: OKRAYNAK, ENGIN  
APPLICANT: PANG, ROY HL  
APPLICANT: COHEN, CHARLES M  
TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
TITLE OF INVENTION: REPAIR  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA HURWITZ & THIBEAULT  
STREET: 55 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02140  
COMPUTER READABLE FORM:  
MEDIUM TYPE: FLOPPY disk  
COMPUTER: IBM PC compatible

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; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/260,675
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/126,100
; FILING DATE:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/07/922,813
; FILING DATE:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/07/667,274
; FILING DATE: 11-MAR-1991
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/07/752,764
; FILING DATE: 30-AUG-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: PITCHER ESQ, EDMUND R
; REGISTRATION NUMBER: 27,829
; REFERENCE/DOCKET NUMBER: CRP-070
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617/248-7000
; TELEFAX: 617/248-7100
; INFORMATION FOR SEQ ID NO: 28:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 102 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; ORIGINAL SOURCE:
; ORGANISM: HOMO SAPIENS
; FEATURE:
; NAME/KEY: Protein
; LOCATION: 1..102
; OTHER INFORMATION: /note= "BMP6"
;
US-08-260-675-28

Query Match      87.4%; Score 97; DB 8; Length 102;
Best Local Similarity 85.0%; Pred. No. 2.5e-05;
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY      1 INPEYVPRCCAPTKLNAIS 20
DB      57 MNPEYVPRCCAPTKLNAIS 76

RESULT 108
US-09-952-318A-13
; Sequence 13, Application US/09952318A
; Publication No. US20030224979A1
; GENERAL INFORMATION:
; APPLICANT: KuberSampath et al.
; TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR INCREASE BONE MASS IN
; FILE REFERENCE: JIJ-P06-522
; CURRENT APPLICATION NUMBER: US/09/952,318A
; PRIOR FILING DATE: 2001-09-13
; PRIOR APPLICATION NUMBER: 09/170,936
; PRIOR FILING DATE: 1998-10-13
; PRIOR APPLICATION NUMBER: 08/432,883
; PRIOR FILING DATE: 1995-05-02
; PRIOR APPLICATION NUMBER: 08/115,914
; PRIOR FILING DATE: 1993-09-01
; PRIOR APPLICATION NUMBER: 07/923,780
; PRIOR FILING DATE: 1992-07-31
; PRIOR APPLICATION NUMBER: 07/752,847
; PRIOR FILING DATE: 1991-08-30
; PRIOR APPLICATION NUMBER: 07/667,274
; PRIOR FILING DATE: 1991-03-11
; NUMBER OF SEQ ID NOS: 33
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; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 13
; LENGTH: 102
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-952-318A-13

Query Match      87.4%; Score 97; DB 10; Length 102;
Best Local Similarity 85.0%; Pred. No. 2.5e-05;
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY      1 INPEYVPRCCAPTKLNAIS 20
DB      57 MNPEYVPRCCAPTKLNAIS 76

RESULT 109
US-09-952-318A-28
; Sequence 28, Application US/09952318A
; Publication No. US20030224979A1
; GENERAL INFORMATION:
; APPLICANT: KuberSampath et al.
; TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR INCREASE BONE MASS IN
; FILE REFERENCE: JIJ-P06-522
; CURRENT APPLICATION NUMBER: US/09/952,318A
; PRIOR FILING DATE: 2001-09-13
; PRIOR APPLICATION NUMBER: 09/170,936
; PRIOR FILING DATE: 1998-10-13
; PRIOR APPLICATION NUMBER: 08/432,883
; PRIOR FILING DATE: 1995-05-02
; PRIOR APPLICATION NUMBER: 08/115,914
; PRIOR FILING DATE: 1993-09-01
; PRIOR APPLICATION NUMBER: 07/923,780
; PRIOR FILING DATE: 1992-07-31
; PRIOR APPLICATION NUMBER: 07/752,847
; PRIOR FILING DATE: 1991-08-30
; PRIOR APPLICATION NUMBER: 07/667,274
; PRIOR FILING DATE: 1991-03-11
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 28
; LENGTH: 102
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-952-318A-28

Query Match      87.4%; Score 97; DB 10; Length 102;
Best Local Similarity 85.0%; Pred. No. 2.5e-05;
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY      1 INPEYVPRCCAPTKLNAIS 20
DB      57 MNPEYVPRCCAPTKLNAIS 76

RESULT 110
US-10-050-050-28
; Sequence 28, Application US/10050050
; Publication No. US20030125230A1
; GENERAL INFORMATION:
; APPLICANT: COHEN, CHARLES M.
; CHARLETTE, MARC F.
; KUBERASAMPATH, THANGAVEL
; RUEGER, DAVID C.
; OPPERMANN, HEERMAN
; PANG, ROY H.L.
; OKRAYNAK, ENGIN
; SMART, JOHN E.
; TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING
; PROLIFERATION OF EPITHELIAL CELLS.
; NUMBER OF SEQUENCES: 33
; CORRESPONDENCE ADDRESS:
```

ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/050.050  
FILING DATE: 15-Jan-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/461.113  
FILING DATE: <Unknown>  
APPLICATION NUMBER: US 08/445.882  
FILING DATE: 22-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON ESQ., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-074DV  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 28:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..102  
OTHER INFORMATION: /label= BMP6  
SEQUENCE DESCRIPTION: SEQ ID NO: 28:  
US-10-050-050-28

Query Match 87.4%; Score 97; DB 14; Length 102;  
Best Local Similarity 85.0%; Pred. No. 2.5e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

CY 1 INPETYKPCCAPTQMAIS 20  
Db 57 MNPEYVPRKPCAPTKLMAIS 76

RESULT 111  
US-10-187-394-14  
Sequence 14, Application US/10187394  
Publication No. US2003017667A1  
GENERAL INFORMATION:  
APPLICANT: KECK, PETER  
APPLICANT: SMART, JOHN  
TITLE OF INVENTION: SINGLE CHAIN ANALOGS OF TGF-B  
NUMBER OF SEQUENCES: 45  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, TESTA, HURWITZ &  
ADDRESS: THIBEAULT, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/187.394  
FILING DATE: 28-JUNE-2002  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/09/496.398  
FILING DATE: 02-FEB-2000  
CLASSIFICATION:  
APPLICATION NUMBER: US 08/478.097  
FILING DATE: 07-JUN-1995  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: FITCHER ESQ, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: STK-059CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-248-7000  
TELEFAX: 617-248-7100  
INFORMATION FOR SEQ ID NO: 14:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..102  
OTHER INFORMATION: /note= "BMP-6 SEQUENCE"  
US-10-187-394-14

Query Match 87.4%; Score 97; DB 14; Length 102;  
Best Local Similarity 85.0%; Pred. No. 2.5e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

CY 1 INPETYKPCCAPTQMAIS 20  
Db 57 MNPEYVPRKPCAPTKLMAIS 76

RESULT 112  
US-09-813-398-29  
Sequence 29, Application US/09813398  
Patent No. US20020169292A1  
GENERAL INFORMATION:  
APPLICANT: Bruce D. Weintraub  
APPLICANT: Mariusz W. Szkludinski  
APPLICANT: University of Maryland  
TITLE OF INVENTION: CYSTEINE KNOT GROWTH FACTOR MUTANTS  
FILE REFERENCE: UOPMD.003C1  
CURRENT APPLICATION NUMBER: US/09/813.398  
CURRENT FILING DATE: 2001-03-20  
PRIOR APPLICATION NUMBER: PCT/US99/05908  
PRIOR FILING DATE: 1999-03-19  
PRIOR APPLICATION NUMBER: PCT/US98/19772  
PRIOR FILING DATE: 1998-09-22  
NUMBER OF SEQ ID NOS: 41  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 29  
LENGTH: 112  
TYPE: PRT  
ORGANISM: HOMO SAPIEN  
US-09-813-398-29

Query Match 87.4%; Score 97; DB 9; Length 112;  
Best Local Similarity 85.0%; Pred. No. 2.8e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

CY 1 INPETYKPCCAPTQMAIS 20  
Db 68 MNPEYVPRKPCAPTKLMAIS 87

RESULT 113  
US-09-389-705-11  
Sequence 11, Application US/09389705  
Publication No. US20010018509A1  
GENERAL INFORMATION:  
APPLICANT: JOHNS HOPKINS UNIVERSITY  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3  
NUMBER OF SEQUENCES: 29  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: SPENCERLY HORN JUBAS & LUBITZ  
STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR  
CITY: LOS ANGELES  
STATE: CALIFORNIA  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/389,705  
FILING DATE: 03-Sep-1999  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 09/153,733  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: WETHERELL, JR. Ph.D., JOHN R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: PD2279 PCT  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 118 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: Vgr-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..118  
SEQUENCE DESCRIPTION: SEQ ID NO: 11:  
US-09-389-705-11  
Query Match 87.4%; Score 97; DB 9; Length 118;  
Best Local Similarity 85.0%; Pred. No. 2.9e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;  
QY 1 INPETHPKCCAPTQNLN1S 20  
Do 73 NMPEYVPKCCAPTQNLN1S 92  
RESULT 114  
US-10-115-406-9  
Sequence 9, Application US/10115406  
Publication No. US20020127612A1  
GENERAL INFORMATION:  
APPLICANT: THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE  
APPLICANT: LEE, Se-jin  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9  
FILE REFERENCE: JHU0190-3  
CURRENT APPLICATION NUMBER: US/10/115,406  
CURRENT FILING DATE: 2002-04-02  
PRIOR APPLICATION NUMBER: 09/301,520  
PRIOR FILING DATE: 1999-04-28  
PRIOR APPLICATION NUMBER: US 09/172,062  
PRIOR FILING DATE: 1998-10-13

PRIOR APPLICATION NUMBER: US 08/491,835  
PRIOR FILING DATE: 1995-10-23  
PRIOR APPLICATION NUMBER: PCT/US94/00685  
PRIOR FILING DATE: 1994-01-12  
PRIOR APPLICATION NUMBER: US 08/003,303  
PRIOR FILING DATE: 1993-01-12  
NUMBER OF SEQ ID NOS: 28  
SOFTWARE: PatentIn version 3.0  
SEQ ID NO: 9  
LENGTH: 118  
TYPE: PRT  
ORGANISM: Mus musculus  
US-10-115-406-9  
Query Match 87.4%; Score 97; DB 13; Length 118;  
Best Local Similarity 85.0%; Pred. No. 2.9e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;  
QY 1 INPETHPKCCAPTQNLN1S 20  
Do 73 NMPEYVPKCCAPTQNLN1S 92  
RESULT 115  
US-10-154-333-11  
Sequence 11, Application US/10154333  
Publication No. US20030109684A1  
GENERAL INFORMATION:  
APPLICANT: JOHNS HOPKINS UNIVERSITY  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3  
NUMBER OF SEQUENCES: 29  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: SPENCERLY HORN JUBAS & LUBITZ  
STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR  
CITY: LOS ANGELES  
STATE: CALIFORNIA  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/154,333  
FILING DATE: 21-May-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/09/389,705  
FILING DATE: 03-Sep-1999  
APPLICATION NUMBER: 09/153,733  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: WETHERELL, JR. Ph.D., JOHN R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: PD2279 PCT  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 118 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: Vgr-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..118  
SEQUENCE DESCRIPTION: SEQ ID NO: 11:  
US-10-154-333-11

Query Match 87.4%; Score 97; DB 14; Length 118;  
Best Local Similarity 85.0%; Pred. No. 2,9e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 INPEYVPCCAPTKLNAIS 20  
DB 73 MNPEYVPCCAPTKLNAIS 92

RESULT 116  
US-10-704-223-9  
Sequence 9, Application US/10704223  
Publication No. US20040152143A1  
GENERAL INFORMATION:  
APPLICANT: THE JOHNS HOPKINS UNIVERSITY  
APPLICANT: LEE, Se-jin  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9  
FILE REFERENCE: JH01190-7  
CURRENT APPLICATION NUMBER: US/10/704,223  
CURRENT FILING DATE: 2003-11-07  
PRIOR APPLICATION NUMBER: US 10/115,406  
PRIOR FILING DATE: 2002-04-02  
PRIOR APPLICATION NUMBER: US 09/301,520  
PRIOR FILING DATE: 1999-04-28  
PRIOR APPLICATION NUMBER: US 09/172,062  
PRIOR FILING DATE: 1998-10-13  
PRIOR APPLICATION NUMBER: US 08/491,835  
PRIOR FILING DATE: 1995-10-23  
PRIOR APPLICATION NUMBER: PCT/US94/00685  
PRIOR FILING DATE: 1994-01-12  
PRIOR APPLICATION NUMBER: US 08/003,303  
PRIOR FILING DATE: 1993-01-12  
NUMBER OF SEQ ID NOS: 28  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 9  
LENGTH: 118  
TYPE: PRT  
ORGANISM: Mus musculus  
US-10-704-223-9

Query Match 87.4%; Score 97; DB 16; Length 118;  
Best Local Similarity 85.0%; Pred. No. 2,9e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 INPEYVPCCAPTKLNAIS 20  
DB 73 MNPEYVPCCAPTKLNAIS 92

RESULT 117  
US-09-813-459-12  
Sequence 12, Application US/09813459  
Patent No. US20020107369A1  
GENERAL INFORMATION:  
APPLICANT: Lee, Se-jin  
Cunningham, No. US20020107369A1  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-10  
NUMBER OF SEQUENCES: 26  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Spensley Horn Jbas & Lubitz  
STREET: 1880 Century Park East, Suite 500  
CITY: Los Angeles  
STATE: California  
COUNTRY: USA  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/813,459

FILING DATE: 20-Mar-2001  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/624,635  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: Wetherell, Jr., Ph.D., John R.,  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: PD-3054  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 12:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
MOLECULE TYPE: linear  
IMMEDIATE SOURCE:  
CLONE: Ygr-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
SEQUENCE DESCRIPTION: SEQ ID NO: 12:  
US-09-813-459-12

Query Match 87.4%; Score 97; DB 9; Length 119;  
Best Local Similarity 85.0%; Pred. No. 2,9e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 INPEYVPCCAPTKLNAIS 20  
DB 74 MNPEYVPCCAPTKLNAIS 93

RESULT 118  
US-09-859-211-39  
Sequence 39, Application US/09859211  
Patent No. US20020157125A1  
GENERAL INFORMATION:  
APPLICANT: Lee, Se-jin  
McPherson, Alexandra C.  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-8  
FILE REFERENCE: 07265/144001  
CURRENT APPLICATION NUMBER: US/09/859,211  
CURRENT FILING DATE: 2001-05-15  
PRIOR APPLICATION NUMBER: 09/019,070  
PRIOR FILING DATE: 1996-02-05  
PRIOR APPLICATION NUMBER: 08/862,445  
PRIOR FILING DATE: 1997-05-23  
PRIOR APPLICATION NUMBER: 08/847,910  
PRIOR FILING DATE: 1997-04-28  
PRIOR APPLICATION NUMBER: 08/795,071  
PRIOR FILING DATE: 1997-02-05  
PRIOR APPLICATION NUMBER: 08/525,596  
PRIOR FILING DATE: 1995-10-26  
PRIOR APPLICATION NUMBER: PCT/US94/03019  
PRIOR FILING DATE: 1994-03-18  
PRIOR APPLICATION NUMBER: 08/033,923  
PRIOR FILING DATE: 1993-03-19  
NUMBER OF SEQ ID NOS: 51  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 39  
LENGTH: 119  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-859-211-39

Query Match 87.4%; Score 97; DB 9; Length 119;  
Best Local Similarity 85.0%; Pred. No. 2,9e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTKLNAIS 20  
DB 74 MNPEYKPCCAPTKLNAIS 93

## RESULT 119

US-09-880-708-17

Sequence 17, Application US/09880708  
Patent No. US20020165361A1  
GENERAL INFORMATION:

APPLICANT: Lee, Se-Jin  
Huyh, Thanh

TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-5

NUMBER OF SEQUENCES: 28

CORRESPONDENCE ADDRESS:

ADDRESSEE: Gray Cary Ware & Freidenrich LLP  
STREET: 4365 Executive Drive, Suite 1600  
CITY: San Diego

STATE: CA  
COUNTRY: USA

ZIP: 92121-2189

COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette

COMPUTER: IBM Compatible  
OPERATING SYSTEM: Windows95

SOFTWARE: FastSeq for Windows Version 2.0

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/880,708  
FILING DATE: 12-Jun-2001

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 09/145,060  
FILING DATE: <Unknown>

APPLICATION NUMBER: 08/003,144  
FILING DATE: 12-JAN-1993

ATTORNEY/AGENT INFORMATION:

NAME: Lisa A. Halle, Ph.D.

REGISTRATION NUMBER: 38,347  
REFERENCE/DOCKET NUMBER: 07265/057002

TELECOMMUNICATION INFORMATION:

TELEPHONE: 858/677-1456  
TELEFAX: 619/677-1465

INFORMATION FOR SEQ ID NO: 17:

SEQUENCE CHARACTERISTICS:

LENGTH: 119 amino acids  
TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein  
IMMEDIATE SOURCE:

CLONE: Vgr-1

SEQUENCE DESCRIPTION: SEQ ID NO: 17:  
US-09-880-708-17

Query Match 87.4%; Score 97; DB 9; Length 119;  
Best Local Similarity 85.0%; Pred. No. 2.9e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTKLNAIS 20  
DB 74 MNPEYKPCCAPTKLNAIS 93

## RESULT 120

US-09-872-856-39

Sequence 39, Application US/09872856  
Publication No. US20030074680A1

GENERAL INFORMATION:

APPLICANT: Johns Hopkins University School of Medicine  
APPLICANT: Lee, Se-Jin

ADDRESSEE: McPherson, Alexandra  
TITLE OF INVENTION: Growth Differentiation Factor-8

FILE REFERENCE: JHU120-17  
CURRENT APPLICATION NUMBER: US/09/872,856  
CURRENT FILING DATE: 2001-06-01

PRIOR APPLICATION NUMBER: US 09/124,180  
PRIOR FILING DATE: 1998-07-28  
PRIOR APPLICATION NUMBER: US 09/019,070  
PRIOR FILING DATE: 1998-02-05  
PRIOR APPLICATION NUMBER: US 08/862,445  
PRIOR FILING DATE: 1997-05-23  
PRIOR APPLICATION NUMBER: US 08/847,910  
PRIOR FILING DATE: 1997-04-28  
PRIOR APPLICATION NUMBER: US 08/795,071  
PRIOR FILING DATE: 1997-02-05  
PRIOR APPLICATION NUMBER: US 08/525,596  
PRIOR FILING DATE: 1995-10-25  
PRIOR APPLICATION NUMBER: PCT/US 94/03019  
PRIOR FILING DATE: 1994-03-18  
PRIOR APPLICATION NUMBER: US 08/033,923  
PRIOR FILING DATE: 1993-03-19  
NUMBER OF SEQ ID NOS: 53  
SOFTWARE: Patent version 3.1  
SEQ ID NO: 39  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-872-856-39

Query Match 87.4%; Score 97; DB 10; Length 119;  
Best Local Similarity 85.0%; Pred. No. 2.9e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTKLNAIS 20  
DB 74 MNPEYKPCCAPTKLNAIS 93

## RESULT 121

US-10-335-483-21

Sequence 21, Application US/10335483  
Publication No. US20030120058A1  
GENERAL INFORMATION:

APPLICANT: Huyh, Thanh  
Lee, Se-Jin

TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-8  
NUMBER OF SEQUENCES: 32

CORRESPONDENCE ADDRESS:  
ADDRESSEE: Fish & Richardson P.C.

STREET: 4225 Executive Square, Suite 1400  
CITY: La Jolla

STATE: CA  
COUNTRY: US

ZIP: 92037

COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible

OPERATING SYSTEM: Windows95  
SOFTWARE: FastSeq for Windows Version 2.0

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/335,483  
FILING DATE: 31-Dec-2002

CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/09/177,860  
FILING DATE: <Unknown>

APPLICATION NUMBER: 08/525,596  
FILING DATE: 19-SEP-1995

APPLICATION NUMBER: PCT/US94/07762  
FILING DATE: 08-JUL-1994

ATTORNEY/AGENT INFORMATION: Ph.D. John R.  
NAME: Wetherell, Jr.

REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: 07265/075001

TELECOMMUNICATION INFORMATION:  
TELEPHONE: 619-678-5070  
TELEFAX: 619-678-5099

INFORMATION FOR SEQ ID NO: 21:



SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: Vgr-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
SEQUENCE DESCRIPTION: SEQ ID NO: 21:  
US-10-335-483-21

Query Match 87.4%; Score 97; DB 14; Length 119;  
Best Local Similarity 85.0%; Pred. No. 2.9e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

CY 1 INPEVVPKPCCAPTKLNAIS 20  
:|||||  
Db 74 MNPEYVPKPCCAPTKLNAIS 93

RESULT 122  
US-10-463-973-39  
Sequence 39, Application US/10463973  
Publication No. US20040055027A1  
GENERAL INFORMATION:  
APPLICANT: Johns Hopkins University School of Medicine  
APPLICANT: Lee, Se-jin  
TITLE OF INVENTION: Growth Differentiation Factor-8  
FILE REFERENCE: JHU1120-17  
CURRENT APPLICATION NUMBER: US/10/463, 973  
CURRENT FILING DATE: 2003-06-17  
PRIOR APPLICATION NUMBER: US/09/872, 856  
PRIOR FILING DATE: 2001-06-01  
PRIOR APPLICATION NUMBER: US/09/124, 180  
PRIOR FILING DATE: 1998-07-28  
PRIOR APPLICATION NUMBER: US/09/019, 070  
PRIOR FILING DATE: 1998-02-05  
PRIOR APPLICATION NUMBER: US/08/862, 445  
PRIOR FILING DATE: 1997-05-23  
PRIOR APPLICATION NUMBER: US/08/847, 910  
PRIOR FILING DATE: 1997-04-28  
PRIOR APPLICATION NUMBER: US/08/795, 071  
PRIOR FILING DATE: 1997-02-05  
PRIOR APPLICATION NUMBER: US/08/525, 596  
PRIOR FILING DATE: 1995-10-25  
PRIOR APPLICATION NUMBER: PCT/US 94/03019  
PRIOR FILING DATE: 1994-03-18  
PRIOR APPLICATION NUMBER: US 08/033, 923  
PRIOR FILING DATE: 1993-03-19  
NUMBER OF SEQ ID NOS: 53  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 39  
LENGTH: 119  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-463-973-39

Query Match 87.4%; Score 97; DB 15; Length 119;  
Best Local Similarity 85.0%; Pred. No. 2.9e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

CY 1 INPEVVPKPCCAPTKLNAIS 20  
:|||||  
Db 74 MNPEYVPKPCCAPTKLNAIS 93

RESULT 123  
US-10-693-536-11  
Sequence 11, Application US/10693536  
Publication No. US20040067556A1

GENERAL INFORMATION:  
APPLICANT: Lee, Se-jin  
Huyhn, Thanh  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-6  
NUMBER OF SEQUENCES: 21  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Fish & Richardson  
STREET: 4225 Executive Square, Suite 1400  
CITY: La Jolla  
STATE: California  
COUNTRY: USA  
ZIP: 92037  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/693, 536  
FILING DATE: 23-Oct-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/09/619, 061  
FILING DATE: 18-Jul-2000  
APPLICATION NUMBER: US/09/097, 616  
FILING DATE: 15-JUN-1998  
APPLICATION NUMBER: US/08/581, 529  
FILING DATE: 15-APR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Lisa A. Haile, Ph.D.  
REGISTRATION NUMBER: 38,347  
REFERENCE/DOCKET NUMBER: 07265/082001  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 678-5070  
FAX: (619) 678-5099  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: Vgr-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
SEQUENCE DESCRIPTION: SEQ ID NO: 11:  
US-10-693-536-11

Query Match 87.4%; Score 97; DB 15; Length 119;  
Best Local Similarity 85.0%; Pred. No. 2.9e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

CY 1 INPEVVPKPCCAPTKLNAIS 20  
:|||||  
Db 74 MNPEYVPKPCCAPTKLNAIS 93

RESULT 124  
US-10-756-210-11  
Sequence 11, Application US/10758210  
Publication No. US20040127696A1  
GENERAL INFORMATION:  
APPLICANT: THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE  
APPLICANT: Lee, Se-jin  
TITLE OF INVENTION: ANTIBODIES BINDING TO GROWTH DIFFERENTIATION FACTOR-7  
FILE REFERENCE: JHU1130-2  
CURRENT APPLICATION NUMBER: US/10/758, 210  
CURRENT FILING DATE: 2004-01-14  
PRIOR APPLICATION NUMBER: US/09/412, 791D  
PRIOR FILING DATE: 1999-10-05

```

; PRIOR APPLICATION NUMBER: US 08/581,528
; PRIOR FILING DATE: 1996-01-09
; PRIOR APPLICATION NUMBER: PCT/US94/07799
; PRIOR FILING DATE: 1994-07-08
; NUMBER OF SEQ ID NOS: 21
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 11
; LENGTH: 119
; TYPE: PRT
; ORGANISM: Mus musculus
US-10-758-210-11

Query Match      87.4%; Score 97; DB 16; Length 119;
Best Local Similarity 85.0%; Pred. No. 2.9e-05;
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Qy      1 INPETYPRKPCCAPTKLNAIS 20
       :|||||:|||||:|||||
Db      74 MNPEYVPRKPCCAPTKLNAIS 93

RESULT 125
US-10-366-345-62
; Sequence 62, Application US/10366345
; Publication No. US20030224501A1
; GENERAL INFORMATION:
; APPLICANT: Young, et al.
; TITLE OF INVENTION: Bone Morphogenetic Protein Polynucleotides, Polypeptides and
; FILE REFERENCE: P1189
; CURRENT APPLICATION NUMBER: US/10/366,345
; CURRENT FILING DATE: 2003-02-14
; NUMBER OF SEQ ID NOS: 77
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 62
; LENGTH: 139
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-366-345-62

Query Match      87.4%; Score 97; DB 14; Length 139;
Best Local Similarity 85.0%; Pred. No. 3.4e-05;
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Qy      1 INPETYPRKPCCAPTKLNAIS 20
       :|||||:|||||:|||||
Db      94 MNPEYVPRKPCCAPTKLNAIS 113

RESULT 126
US-10-002-278-5
; Sequence 5, Application US/10002278
; Publication No. US20020132334A1
; GENERAL INFORMATION:
; APPLICANT: Jeseell, Thomas M.
; APPLICANT: Baseler, Konard
; APPLICANT: Yamada, Toshiya
; TITLE OF INVENTION: CLONING, EXPRESSION AND USES OF DORSALIN-1
; FILE REFERENCE: 0575/40314-A
; CURRENT APPLICATION NUMBER: US/10/002,278
; CURRENT FILING DATE: 2001-11-02
; NUMBER OF SEQ ID NOS: 18
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 5
; LENGTH: 143
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: COOH-terminus of BMP-6
; NAME/KEY: DORSALIN
; LOCATION: (1)..(143)
; OTHER INFORMATION:
US-10-002-278-5
```

```

Query Match      87.4%; Score 97; DB 13; Length 143;
Best Local Similarity 85.0%; Pred. No. 3.5e-05;
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Qy      1 INPETYPRKPCCAPTKLNAIS 20
       :|||||:|||||:|||||
Db      98 MNPEYVPRKPCCAPTKLNAIS 117

RESULT 127
US-09-784-911-8
; Sequence 8, Application US/09784911
; Patent No. US20020072115A1
; GENERAL INFORMATION:
; APPLICANT: Harrison, Leonard C.
; APPLICANT: Jiang, Fang-Xu
; APPLICANT: Stanley, Edouard Guy
; APPLICANT: Gomez, Leonel Jorge
; TITLE OF INVENTION: Pancreatic islet cell growth factors
; FILE REFERENCE: Davies Collison Cave
; CURRENT APPLICATION NUMBER: US/09/784,911
; CURRENT FILING DATE: 2001-09-17
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: PatentIn version 2.1
; SEQ ID NO 8
; LENGTH: 433
; TYPE: PRT
; ORGANISM: mouse
US-09-784-911-8

Query Match      87.4%; Score 97; DB 9; Length 433;
Best Local Similarity 85.0%; Pred. No. 0.0001;
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Qy      1 INPETYPRKPCCAPTKLNAIS 20
       :|||||:|||||:|||||
Db      368 MNPEYVPRKPCCAPTKLNAIS 407

RESULT 128
US-09-784-911-4
; Sequence 4, Application US/09784911
; Patent No. US20020072115A1
; GENERAL INFORMATION:
; APPLICANT: Harrison, Leonard C.
; APPLICANT: Jiang, Fang-Xu
; APPLICANT: Stanley, Edouard Guy
; APPLICANT: Gomez, Leonel Jorge
; TITLE OF INVENTION: Pancreatic islet cell growth factors
; FILE REFERENCE: Davies Collison Cave
; CURRENT APPLICATION NUMBER: US/09/784,911
; CURRENT FILING DATE: 2001-09-17
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: PatentIn version 2.1
; SEQ ID NO 4
; LENGTH: 437
; TYPE: PRT
; ORGANISM: mouse
; FEATURE:
; NAME/KEY: UNSURE
; LOCATION: (186)
; OTHER INFORMATION: Xaa at position 186 is Tyr or His
US-09-784-911-4

Query Match      87.4%; Score 97; DB 9; Length 437;
Best Local Similarity 85.0%; Pred. No. 0.0001;
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Qy      1 INPETYPRKPCCAPTKLNAIS 20
       :|||||:|||||:|||||
Db      392 MNPEYVPRKPCCAPTKLNAIS 411
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RESULT 129  
US-09-784-911-10  
Sequence 10, Application US/09784911  
Patent No. US20020072115A1  
GENERAL INFORMATION:  
APPLICANT: Harrison, Leonard C.  
APPLICANT: Jiang, Fang-Xu  
APPLICANT: Stanley, Edward Guy  
APPLICANT: Gomez, Leonel Jorge  
TITLE OF INVENTION: Pancreatic islet cell growth factors  
FILE REFERENCE: Davies Collision Cave  
CURRENT APPLICATION NUMBER: US/09/784,911  
CURRENT FILING DATE: 2001-09-17  
NUMBER OF SEQ ID NOS: 30  
SOFTWARE: PatentIn version 2.1  
SEQ ID NO 10  
LENGTH: 451  
TYPE: PRT  
ORGANISM: mouse  
US-09-784-911-10

Query Match 87.4%; Score 97; DB 9; Length 451;  
Best Local Similarity 85.0%; Pred. No. 0.00011;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTOLNAIS 20  
Db 390 MNPEYVXPCCAPTOLNAIS 409

RESULT 130  
US-10-122-026-19  
Sequence 19, Application US/10122026  
Publication No. US20030105004A1  
GENERAL INFORMATION:  
APPLICANT: JONES, WILLIAM K  
TUCKER, RONALD F  
RUEGER, DAVID C  
OPFERMANN, HERMANN  
OKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
TITLE OF INVENTION: NOVEL MORPHOGENIC PROTEIN COMPOSITIONS  
OF MATTER  
NUMBER OF SEQUENCES: 23  
CORRESPONDENCE ADDRESSES:  
ADDRESSSEE: Patent Administrator, Testa, Hurwitz &  
Thibault, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/122,026  
FILING DATE: 29-Aug-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/402,542  
FILING DATE: 13-MAR-1995  
APPLICATION NUMBER: US 08/840,510  
FILING DATE: 31-MAR-1993  
APPLICATION NUMBER: US 08/029,335  
FILING DATE: 04-MAR-1993  
APPLICATION NUMBER: US 07/971,091  
FILING DATE: 03-NOV-1992  
APPLICATION NUMBER: US 07/946,235  
FILING DATE: 16-SEP-1992

APPLICATION NUMBER: US 07/938,336  
FILING DATE: 28-AUG-1992  
APPLICATION NUMBER: US 07/923,780  
FILING DATE: 31-JUL-1992  
APPLICATION NUMBER: US 07/752,857  
FILING DATE: 30-AUG-1991  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: CAMACHO, JENNIFER A.  
REGISTRATION NUMBER: 43,526  
REFERENCE/DOCKET NUMBER: STR-060CN  
INFORMATION FOR SEQ ID NO: 19:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 513 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..513  
OTHER INFORMATION: /note="PRE-PRO-BMP6 (HUMAN)"  
PUBLICATION INFORMATION:  
AUTHORS: CELESTE  
JOURNAL: Proc. Natl. Acad. Sci. U.S.A.  
VOLUME: 87  
PAGES: 9843-9847  
DATE: 1991  
US-10-122-026-19  
SEQUENCE DESCRIPTION: SEQ ID NO: 19:

Query Match 87.4%; Score 97; DB 14; Length 513;  
Best Local Similarity 85.0%; Pred. No. 0.00012;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTOLNAIS 20  
Db 468 MNPEYVXPCCAPTOLNAIS 487

RESULT 131  
US-10-164-279-33  
Sequence 33, Application US/10164279  
Publication No. US20030185792A1  
GENERAL INFORMATION:  
APPLICANT: Keck, P.  
TITLE OF INVENTION: MORPHOGEN ANALOGS OF BOND MORPHOGENIC PROTEINS  
FILE REFERENCE: CIBT-P04-566  
CURRENT APPLICATION NUMBER: US/10/164,279  
CURRENT FILING DATE: 2002-06-06  
PRIOR APPLICATION NUMBER: 09/791346  
PRIOR FILING DATE: 2001-02-22  
NUMBER OF SEQ ID NOS: 64  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 33  
LENGTH: 513  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-164-279-33

Query Match 87.4%; Score 97; DB 14; Length 513;  
Best Local Similarity 85.0%; Pred. No. 0.00012;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTOLNAIS 20  
Db 468 MNPEYVXPCCAPTOLNAIS 487

RESULT 132

US-10-366-345-38  
; Sequence 38, Application US/10366345  
; Publication No. US20030224501A1  
; GENERAL INFORMATION:  
; APPLICANT: Young, et al.  
; TITLE OF INVENTION: Bone Morphogenetic Protein Polynucleotides, Polypeptides and  
; TITLE OF INVENTION: Antibodies  
; FILE REFERENCE: PT189  
; CURRENT APPLICATION NUMBER: US/10/366,345  
; CURRENT FILING DATE: 2003-02-14  
; NUMBER OF SEQ ID NOS: 77  
; SOFTWARE: PatentIn version 3.2  
; SEQ ID NO 38  
; LENGTH: 513  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-366-345-38

Query Match 87.4%; Score 97; DB 14; Length 513;  
Best Local Similarity 85.0%; Pred. No. 0.00012;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTQNLNALS 20  
DB 468 MNPEYVPRKPCCAPTKLNALS 487  
RESULT 133  
US-10-291-265-816  
; Sequence 816, Application US/10291265  
; Publication No. US2003023054A1  
; GENERAL INFORMATION:  
; APPLICANT: Hyseq, Inc.  
; APPLICANT: Tang et al.  
; TITLE OF INVENTION: No. US2003023054A1 Nucleic Acids and Polypeptides  
; FILE REFERENCE: 21272-017 (785)  
; CURRENT APPLICATION NUMBER: US/10/291,265  
; CURRENT FILING DATE: 2000-01-25  
; PRIOR APPLICATION NUMBER: 09/491,404  
; PRIOR FILING DATE: 2000-01-25  
; PRIOR APPLICATION NUMBER: 09/617,746  
; PRIOR FILING DATE: 2000-07-17  
; PRIOR APPLICATION NUMBER: 09/631,451  
; PRIOR FILING DATE: 2000-08-03  
; PRIOR APPLICATION NUMBER: 09/633,870  
; PRIOR FILING DATE: 2000-09-15  
; NUMBER OF SEQ ID NOS: 944  
; SOFTWARE: FastSeq for Windows Version 3.0  
; SEQ ID NO 816  
; LENGTH: 513  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-291-265-816

Query Match 87.4%; Score 97; DB 14; Length 513;  
Best Local Similarity 85.0%; Pred. No. 0.00012;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTQNLNALS 20  
DB 468 MNPEYVPRKPCCAPTKLNALS 487  
RESULT 134  
US-10-375-150-8  
; Sequence 8, Application US/10375150  
; Publication No. US20030235888A1  
; GENERAL INFORMATION:  
; APPLICANT: Israel, David  
; APPLICANT: Wolfman, Neil M.  
; TITLE OF INVENTION: Recombinant Bone Morphogenetic Protein  
; TITLE OF INVENTION: Heterodimers, Compositions and Methods of Use.  
; NUMBER OF SEQUENCES: 30

CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Legal Affairs, Genetics Institute, Inc.  
; STREET: 87 Cambridgepark Drive  
; CITY: Cambridge  
; STATE: MA  
; COUNTRY: USA  
; ZIP: 02140-2367  
COMPUTER READABLE FORM:  
; MEDIUM TYPE: Tape  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/10/375,150  
; FILING DATE:  
CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US/07/989,847  
; FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
; NAME: Kapinos, Ellen J.  
; REGISTRATION NUMBER: 32,245  
REFERENCE/DOCKET NUMBER: GI-5192B  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 617-876-1170  
; TELEFAX: 617-876-5851  
INFORMATION FOR SEQ ID NO: 8:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 513 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-10-375-150-8

Query Match 87.4%; Score 97; DB 14; Length 513;  
Best Local Similarity 85.0%; Pred. No. 0.00012;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTQNLNALS 20  
DB 468 MNPEYVPRKPCCAPTKLNALS 487  
RESULT 135  
US-08-260-675-13  
; Sequence 13, Application US/08260675  
; Publication No. US20030104993A1  
; GENERAL INFORMATION:  
; APPLICANT: RUEGER, DAVID C  
; APPLICANT: KUBERASAMPATH, THANGAVEL  
; APPLICANT: OPPERMAN, HERMANN  
; APPLICANT: OKAYNAK, ENGIN  
; APPLICANT: PANG, ROY HU  
; APPLICANT: COHEN, CHARLES M  
; TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
; TITLE OF INVENTION: REPAIR  
; NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
; ADDRESSEE: TESTA HORWITZ & THIBEAULT  
; STREET: 55 STATE STREET  
; CITY: BOSTON  
; STATE: MA  
; COUNTRY: USA  
; ZIP: 02140  
COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/260,675  
; FILING DATE:  
CLASSIFICATION: 435

Tue Oct 26 09:17:06 2004

us-10-619-910-11.oct24.rapb

Page 51

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      PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US/08/126,100
      FILING DATE:
      PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US/07/922,813
      FILING DATE:
      PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 07/667,274
      FILING DATE: 11-MAR-1991
      PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 07/752,764
      FILING DATE: 30-AUG-1991
      ATTORNEY/AGENT INFORMATION:
      NAME: PITCHER ESQ, EDWARD R
      REGISTRATION NUMBER: 27,829
      REFERENCE/DOCKET NUMBER: CRP-070
      TELECOMMUNICATION INFORMATION:
      TELEPHONE: 617/248-7000
      TELEFAX: 617/248-7100
      INFORMATION FOR SEQ ID NO: 13:
      SEQUENCE CHARACTERISTICS:
      LENGTH: 102 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
      MOLECULE TYPE: protein
      ORIGINAL SOURCE:
      ORGANISM: MORIDAE
      FEATURE:
      NAME/KEY: Protein
      LOCATION: 1..102
      OTHER INFORMATION: /label= VGR-1-FX
US-08-260-675-13

Query Match      84.7%; Score 94; DB 8; Length 102;
Best Local Similarity 80.0%; Pred. No. 6.3e-05;
Matches 16; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Cy      1 INPETYKPCCAPTOLNAIS 20
Db      57 MNPEYVPRKCCAPTKYNAIS 76

RESULT 136
US-10-050-050-13
; Sequence 13, Application US/10050050
; Publication No. US2003012230A1
; GENERAL INFORMATION:
; APPLICANT: COHEN, CHARLES M.
; CHARETTE, MARC F.
; KUBERASAMPATH, THANGAVEL
; RUEGER, DAVID C.
; OPPERMAN, HERMANN
; PANG, ROY H.L.
; OKATNAK, ENGIN
; SMART, JOHN E.
; TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING
; PROLIFERATION OF EPITHELIAL CELLS.
; NUMBER OF SEQUENCES: 33
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES
; STREET: 45 SOUTH STREET
; CITY: HOPKINTON
; STATE: MA
; COUNTRY: USA
; ZIP: 01748
; COMPUTER READABLE FORM:
; MEDIUM TYPE: floppy disk
; COMPUTER: IBM PC COMPATIBLE
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/050,050
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      FILING DATE: 15-Jan-2002
      CLASSIFICATION: <Unknown>
      PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US/08/461,113
      FILING DATE: <Unknown>
      APPLICATION NUMBER: US 08/445,882
      FILING DATE: 22-MAY-1995
      ATTORNEY/AGENT INFORMATION:
      NAME: PENTON ESQ, GILLIAN M.
      REGISTRATION NUMBER: 36,508
      REFERENCE/DOCKET NUMBER: CRP-074DV
      TELECOMMUNICATION INFORMATION:
      TELEPHONE: (508) 435-9001
      TELEFAX: (508) 435-6951
      INFORMATION FOR SEQ ID NO: 13:
      SEQUENCE CHARACTERISTICS:
      LENGTH: 102 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
      MOLECULE TYPE: protein
      FEATURE:
      NAME/KEY: Protein
      LOCATION: 1..102
      OTHER INFORMATION: /note= "VGR-1(FX)"
US-10-050-050-13

Query Match      84.7%; Score 94; DB 14; Length 102;
Best Local Similarity 80.0%; Pred. No. 6.3e-05;
Matches 16; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Cy      1 INPETYKPCCAPTOLNAIS 20
Db      57 MNPEYVPRKCCAPTKYNAIS 76

RESULT 137
US-10-385-064-13
; Sequence 13, Application US/10385064
; Publication No. US20040102373A1
; GENERAL INFORMATION:
; APPLICANT: Cohen, Charles M.
; APPLICANT: Kuberassampath, Thangavel
; APPLICANT: Oppermann, Hermann
; APPLICANT: Rueger, David C.
; TITLE OF INVENTION: Protein Induced Morphogenesis
; FILE REFERENCE: CBM-2 DIV (00960-502 DIV)
; CURRENT APPLICATION NUMBER: US/10/385,064
; CURRENT FILING DATE: 2003-03-10
; PRIOR APPLICATION NUMBER: US/09/464,206
; PRIOR FILING DATE: 1999-12-15
; PRIOR APPLICATION NUMBER: 08/396,684
; PRIOR FILING DATE: 1995-03-01
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: Patent Ver. 2.0
; SEQ ID NO 13
; LENGTH: 102
; TYPE: PRT
; ORGANISM: Murinae gen. sp.
; FEATURE:
; OTHER INFORMATION: VGR-1-FX
US-10-385-064-13

Query Match      84.7%; Score 94; DB 16; Length 102;
Best Local Similarity 80.0%; Pred. No. 6.3e-05;
Matches 16; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Cy      1 INPETYKPCCAPTOLNAIS 20
Db      57 MNPEYVPRKCCAPTKYNAIS 76
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RESULT 139  
US-10-187-394-30  
; Sequence 30, Application US/10187394  
; Publication No. US20030176667A1  
; GENERAL INFORMATION:  
; APPLICANT: KECK, PETER  
; APPLICANT: SMART, JOHN  
; TITLE OF INVENTION: SINGLE CHAIN ANALOGS OF TGF-B  
; NUMBER OF SEQUENCES: 45  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: PATENT ADMINISTRATOR, TESTA, HURWITZ &  
; ADDRESS: THIBEAULT, LLP  
; STREET: 125 HIGH STREET  
; CITY: BOSTON  
; STATE: MA  
; COUNTRY: USA  
; ZIP: 02110  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/10/187,394  
; FILING DATE: 28-JUNE-2002  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US/09/496,398  
; FILING DATE: 02-FEB-2000  
; CLASSIFICATION:  
; APPLICATION NUMBER: US 08/478,097  
; FILING DATE: 07-JUN-1995  
; ATTORNEY/AGENT INFORMATION:  
; NAME: PITCHER ESO, EDWARD R  
; REGISTRATION NUMBER: 27,829  
; REFERENCE/DOCKET NUMBER: STK-059CN  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 617-248-7000  
; TELEFAX: 617-248-7100  
; INFORMATION FOR SEQ ID NO: 30:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 115 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FEATURE:  
; NAME/KEY: Protein  
; LOCATION: 1..115  
; OTHER INFORMATION: /note= "OP-1 MORPHON PROTEIN"  
US-10-187-394-30

Query Match 81.5%; Score 90.5; DB 14; Length 115;  
Best Local Similarity 82.6%; Pred. No. 0.0002;  
Matches 19; Conservative 0; Mismatches 1; Indels 3; Gaps 1;

QY 1 INPETHKPC--CAPTOLNAIS 20  
DB 67 INPETHKPCASGCGCAPTOLNAIS 89

RESULT 139  
US-08-260-675-27  
; Sequence 27, Application US/08260675  
; Publication No. US20030104993A1  
; GENERAL INFORMATION:  
; APPLICANT: RUEGER, DAVID C  
; APPLICANT: KUBERSAMPATH, THANGAVEL  
; APPLICANT: OPERMAN, HERMANN  
; APPLICANT: OZAKYAK, ENGIN  
; APPLICANT: PANG, ROY HL

APPLICANT: COHEN, CHARLES M  
; TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
; NUMBER OF SEQUENCES: 33  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: TESTA HURWITZ & THIBEAULT  
; STREET: 55 STATE STREET  
; CITY: BOSTON  
; STATE: MA  
; COUNTRY: USA  
; ZIP: 02140  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/260,675  
; FILING DATE:  
; CLASSIFICATION: 435  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US/08/126,100  
; FILING DATE:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US/07/922,813  
; FILING DATE:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/667,274  
; FILING DATE: 11-MAR-1991  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/752,764  
; FILING DATE: 30-AUG-1991  
; ATTORNEY/AGENT INFORMATION:  
; NAME: PITCHER ESO, EDWARD R  
; REGISTRATION NUMBER: 27,829  
; REFERENCE/DOCKET NUMBER: CRP-070  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 617/248-7000  
; TELEFAX: 617/248-7100  
; INFORMATION FOR SEQ ID NO: 27:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 102 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; ORIGINAL SOURCE:  
; ORGANISM: HOMO SAPIENS  
; FEATURE:  
; NAME/KEY: Protein  
; LOCATION: 1..102  
; OTHER INFORMATION: /note= "BMP5"  
US-08-260-675-27

Query Match 78.4%; Score 87; DB 8; Length 102;  
Best Local Similarity 83.3%; Pred. No. 0.00052;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRPCAPTOLNAIS 20  
DB 59 PDHVPKPCAPTKLNAIS 76

RESULT 140  
US-09-952-318A-27  
; Sequence 27, Application US/09952318A  
; Publication No. US20030224979A1  
; GENERAL INFORMATION:  
; APPLICANT: KUBERSAMPATH et al.  
; TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR INCREASE BONE MASS IN  
; FILE REFERENCE: J09-P06-522  
; CURRENT APPLICATION NUMBER: US/09/952,318A

Tue Oct 26 09:17:06 2004

us-10-619-910-11.oct24.rapb

Page 53

CURRENT FILING DATE: 2001-09-13  
PRIOR APPLICATION NUMBER: 09/170,936  
PRIOR FILING DATE: 1998-10-13  
PRIOR APPLICATION NUMBER: 08/432,883  
PRIOR FILING DATE: 1995-05-02  
PRIOR APPLICATION NUMBER: 08/115,914  
PRIOR FILING DATE: 1993-09-01  
PRIOR APPLICATION NUMBER: 07/923,780  
PRIOR FILING DATE: 1992-07-31  
PRIOR APPLICATION NUMBER: 07/752,847  
PRIOR FILING DATE: 1991-08-30  
PRIOR APPLICATION NUMBER: 07/667,274  
PRIOR FILING DATE: 1991-03-11  
NUMBER OF SEQ ID NOS: 33  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 27  
LENGTH: 102  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-952-318A-27

Query Match 78.4%; Score 87; DB 10; Length 102;  
Best Local Similarity 83.3%; Pred. No. 0.00052;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRCCAPTQNLNALS 20  
DB 59 PDHVPKPCCAPTKLNLALS 76

RESULT 141  
US-10-050-050-27  
Sequence 27, Application US/10050050  
Publication No. US20030125230A1  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M.  
CHARETTE, MARC F.  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
OPPERMANN, HERMANN  
PANG, ROY H.L.  
OKAYNAK, ENGIN  
SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING  
PROLIFERATION OF EPITHELIAL CELLS.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/050,050  
FILING DATE: 15-JAN-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/461,113  
FILING DATE: <Unknown>  
APPLICATION NUMBER: US 08/445,882  
FILING DATE: 22-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-074DV  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001

TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 27:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..102  
OTHER INFORMATION: /label= Bmps  
SEQUENCE DESCRIPTION: SEQ ID NO: 27:  
US-10-050-050-27

Query Match 78.4%; Score 87; DB 14; Length 102;  
Best Local Similarity 83.3%; Pred. No. 0.00052;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRCCAPTQNLNALS 20  
DB 59 PDHVPKPCCAPTKLNLALS 76

RESULT 142  
US-10-187-394-13  
Sequence 13, Application US/10187394  
Publication No. US20030176667A1  
GENERAL INFORMATION:  
APPLICANT: KACK, PETER  
APPLICANT: SMART, JOHN  
TITLE OF INVENTION: SINGLE CHAIN ANALOGS OF TGF-B  
NUMBER OF SEQUENCES: 45  
CORRESPONDENCE ADDRESS:  
ADDRESSSEE: PATENT ADMINISTRATOR, TESTA, HURWITZ &  
ADRESSEE: THIBEAULT, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/187,394  
FILING DATE: 28-JUNE-2002  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/09/496,398  
FILING DATE: 02-FEB-2000  
CLASSIFICATION:  
APPLICATION NUMBER: US 08/478,097  
FILING DATE: 07-JUN-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ, EDWUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: STK-059CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-248-7000  
TELEFAX: 617-248-7100  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:

NAME/KEY: Protein  
LOCATION: 1..102  
OTHER INFORMATION: /note= "BMP-5 SEQUENCE"  
US-10-187-394-13

Query Match 78.4%; Score 87; DB 14; Length 102;  
Best Local Similarity 83.3%; Pred. No. 0.00052;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRCCAPTQNAIS 20  
|:|||||:|||||  
DB 59 PDHVPKCCAPTQNAIS 76

RESULT 143  
US-09-389-705-13  
; Sequence 13, Application US/09389705  
; Publication No. US2001018509A1  
; GENERAL INFORMATION:  
; APPLICANT: JOHNS HOPKINS UNIVERSITY  
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3  
; NUMBER OF SEQUENCES: 29  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: SPENSLEY HORN JUBAS & LUBITZ  
; STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR  
; CITY: LOS ANGELES  
; STATE: CALIFORNIA  
; COUNTRY: US  
; ZIP: 90067  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: floppy disk  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/389,705  
; FILING DATE: 03-Sep-1999  
; CLASSIFICATION: <Unknown>  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 09/153,733  
; FILING DATE: <Unknown>  
; ATTORNEY/AGENT INFORMATION:  
; NAME: WETHERELL, JR. Ph.D., JOHN R.  
; REGISTRATION NUMBER: 31,678  
; REFERENCE/DOCKET NUMBER: FD2279 PCT  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (619) 455-5100  
; TELEFAX: (619) 455-5110  
; INFORMATION FOR SEQ ID NO: 13:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 118 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; IMMEDIATE SOURCE:  
; CLONE: BMP-5  
; FEATURE:  
; NAME/KEY: Protein  
; LOCATION: 1..118  
; SEQUENCE DESCRIPTION: SEQ ID NO: 13:  
US-09-389-705-13

Query Match 78.4%; Score 87; DB 9; Length 118;  
Best Local Similarity 83.3%; Pred. No. 0.0006;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRCCAPTQNAIS 20  
|:|||||:|||||  
DB 75 PDHVPKCCAPTQNAIS 92

RESULT 144

US-10-115-406-11  
; Sequence 11, Application US/10115406  
; Publication No. US20020127612A1  
; GENERAL INFORMATION:  
; APPLICANT: THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE  
; APPLICANT: LEE, Se-Jin  
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9  
; FILE REFERENCE: JH01190-3  
; CURRENT APPLICATION NUMBER: US/10/115,406  
; CURRENT FILING DATE: 2002-04-02  
; PRIOR APPLICATION NUMBER: 09/301,520  
; PRIOR FILING DATE: 1999-04-28  
; PRIOR APPLICATION NUMBER: US 09/172,062  
; PRIOR FILING DATE: 1998-10-13  
; PRIOR APPLICATION NUMBER: US 08/491,835  
; PRIOR FILING DATE: 1995-10-23  
; PRIOR APPLICATION NUMBER: PCT/US94/00685  
; PRIOR FILING DATE: 1994-01-12  
; PRIOR APPLICATION NUMBER: US 08/003,303  
; PRIOR FILING DATE: 1993-01-12  
; NUMBER OF SEQ ID NOS: 28  
; SOFTWARE: Patent version 3.0  
; SEQ ID NO 11  
; TYPE: PRT  
; LENGTH: 118  
; ORGANISM: Homo sapiens  
US-10-115-406-11

Query Match 78.4%; Score 87; DB 13; Length 118;  
Best Local Similarity 83.3%; Pred. No. 0.0006;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRCCAPTQNAIS 20  
|:|||||:|||||  
DB 75 PDHVPKCCAPTQNAIS 92

RESULT 145  
US-10-154-333-13  
; Sequence 13, Application US/10154333  
; Publication No. US20030109694A1  
; GENERAL INFORMATION:  
; APPLICANT: JOHNS HOPKINS UNIVERSITY  
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3  
; NUMBER OF SEQUENCES: 29  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: SPENSLEY HORN JUBAS & LUBITZ  
; STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR  
; CITY: LOS ANGELES  
; STATE: CALIFORNIA  
; COUNTRY: US  
; ZIP: 90067  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: floppy disk  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/10/154,333  
; FILING DATE: 21-May-2002  
; CLASSIFICATION: <Unknown>  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US/09/389,705  
; FILING DATE: 03-Sep-1999  
; APPLICATION NUMBER: 09/153,733  
; FILING DATE: <Unknown>  
; ATTORNEY/AGENT INFORMATION:  
; NAME: WETHERELL, JR. Ph.D., JOHN R.  
; REGISTRATION NUMBER: 31,678  
; REFERENCE/DOCKET NUMBER: FD2279 PCT  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (619) 455-5100  
; TELEFAX: (619) 455-5110



INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 118 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: BNP-5  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..118  
SEQUENCE DESCRIPTION: SEQ ID NO: 13:  
US-10-154-333-13

Query Match 78.4%; Score 87; DB 14; Length 118;  
Best Local Similarity 83.3%; Pred. No. 0.0006;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRCCAPTQNAIS 20  
|:|||||:|||||  
75 PDHVPKPCCAPTKNAIS 92

RESULT 146  
US-10-704-223-11  
; Sequence 11, Application US/10704223  
; Publication No. US20040152143A1  
; GENERAL INFORMATION:  
; APPLICANT: THE JOHNS HOPKINS UNIVERSITY  
; APPLICANT: LEE, Se-jin  
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9  
; FILE REFERENCE: JH01190-7  
; CURRENT APPLICATION NUMBER: US/10/704,223  
; CURRENT FILING DATE: 2003-11-07  
; PRIOR APPLICATION NUMBER: US 10/115,406  
; PRIOR FILING DATE: 2002-04-02  
; PRIOR APPLICATION NUMBER: US 09/301,520  
; PRIOR FILING DATE: 1999-04-28  
; PRIOR APPLICATION NUMBER: US 09/172,062  
; PRIOR FILING DATE: 1998-10-13  
; PRIOR APPLICATION NUMBER: US 08/491,835  
; PRIOR FILING DATE: 1995-10-23  
; PRIOR APPLICATION NUMBER: PCT/US94/00685  
; PRIOR FILING DATE: 1994-01-12  
; PRIOR APPLICATION NUMBER: US 08/003,303  
; PRIOR FILING DATE: 1993-01-12  
; NUMBER OF SEQ ID NOS: 28  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 11  
; LENGTH: 118  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-704-223-11

Query Match 78.4%; Score 87; DB 16; Length 118;  
Best Local Similarity 83.3%; Pred. No. 0.0006;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRCCAPTQNAIS 20  
|:|||||:|||||  
75 PDHVPKPCCAPTKNAIS 92

RESULT 147  
US-09-813-459-14  
; Sequence 14, Application US/09813459  
; Patent No. US20020107369A1  
; GENERAL INFORMATION:  
; APPLICANT: Lee, Se-jin  
; Cunnigham, No. US20020107369A1  
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-10  
; NUMBER OF SEQUENCES: 26

## CORRESPONDENCE ADDRESS:

ADDRESSEE: Spensley Horn Jubae & Lubitz  
STREET: 1880 Century Park East, Suite 500  
CITY: Los Angeles  
STATE: California  
COUNTRY: USA  
ZIP: 90067

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/813,459  
FILING DATE: 20-Mar-2001  
CLASSIFICATION: <unknown>

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/624,635  
FILING DATE: <unknown>

ATTORNEY/AGENT INFORMATION:  
NAME: Netherell, Jr., Ph.D., John R.,

REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: PD-3054

TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110

INFORMATION FOR SEQ ID NO: 14:  
SEQUENCE CHARACTERISTICS:

LENGTH: 119 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

IMMEDIATE SOURCE:  
CLONE: BNP-5

FEATURE:  
NAME/KEY: Protein

LOCATION: 1..119

SEQUENCE DESCRIPTION: SEQ ID NO: 14:  
US-09-813-459-14

Query Match 78.4%; Score 87; DB 9; Length 119;  
Best Local Similarity 83.3%; Pred. No. 0.0006;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRCCAPTQNAIS 20  
|:|||||:|||||  
76 PDHVPKPCCAPTKNAIS 93

RESULT 148  
US-09-859-211-41

; Sequence 41, Application US/09859211  
; Patent No. US20020157125A1  
; GENERAL INFORMATION:

; APPLICANT: Lee, Se-jin

; APPLICANT: McPherson, Alexandra C.

; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-8

; FILE REFERENCE: 07265/144001

; CURRENT APPLICATION NUMBER: US/09/859,211

; CURRENT FILING DATE: 2001-05-15

; PRIOR APPLICATION NUMBER: 09/019,070

; PRIOR FILING DATE: 1998-02-05

; PRIOR APPLICATION NUMBER: 08/862,445

; PRIOR FILING DATE: 1997-05-23

; PRIOR APPLICATION NUMBER: 08/847,910

; PRIOR FILING DATE: 1997-04-28

; PRIOR APPLICATION NUMBER: 08/795,071

; PRIOR FILING DATE: 1997-02-05

; PRIOR APPLICATION NUMBER: 08/525,596

; PRIOR FILING DATE: 1995-10-26

; PRIOR APPLICATION NUMBER: PCT/US94/03019

; PRIOR FILING DATE: 1994-03-18

```

; PRIOR APPLICATION NUMBER: 08/033,923
; PRIOR FILING DATE: 1993-03-19
; NUMBER OF SEQ ID NOS: 51
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 41
; LENGTH: 119
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-859-211-41

Query Match      78.4%; Score 87; DB 9; Length 119;
Best Local Similarity 83.3%; Pred. No. 0.0006;
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY      3 PETVPRCCAPTQMAIS 20
       1:|||||:|||||
       76 PDHVPKPCAPTQMAIS 93

RESULT 149
US-09-880-708-19
; Sequence 19, Application US/09880708
; Patent No. US20020165361A1
; GENERAL INFORMATION:
; APPLICANT: Lee, Se-Jin
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-5
; NUMBER OF SEQUENCES: 28
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Gray Cary Ware & Freidenrich LLP
; STREET: 4365 Executive Drive, Suite 1600
; CITY: San Diego
; STATE: CA
; COUNTRY: USA
; ZIP: 92121-2189
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: Windows95
; SOFTWARE: FastSeq for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/880,708
; FILING DATE: 12-Jun-2001
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 09/145,060
; FILING DATE: <Unknown>
; APPLICATION NUMBER: 08/003,144
; FILING DATE: 12-JAN-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Lisa A. Haile, Ph.D.
; REGISTRATION NUMBER: 38,347
; REFERENCE/DOCKET NUMBER: 07265/057002
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 858/677-1456
; TELEFAX: 619/677-1456
; INFORMATION FOR SEQ ID NO: 19:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 119 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; IMMEDIATE SOURCE:
; CLONE: BMP-5
; SEQUENCE DESCRIPTION: SEQ ID NO: 19:
US-09-880-708-19

Query Match      78.4%; Score 87; DB 9; Length 119;
Best Local Similarity 83.3%; Pred. No. 0.0006;
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY      3 PETVPRCCAPTQMAIS 20
       1:|||||:|||||
       76 PDHVPKPCAPTQMAIS 93

Db      76 PDHVPKPCAPTQMAIS 93
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US-09-872-856-41
; Sequence 41, Application US/09872856
; Publication No. US20030074680A1
; GENERAL INFORMATION:
; APPLICANT: Johns Hopkins University School of Medicine
; APPLICANT: Lee, Se-Jin
; APPLICANT: McPherson, Alexandra
; TITLE OF INVENTION: Growth Differentiation Factor-8
; FILE REFERENCE: JHU1120-17
; CURRENT APPLICATION NUMBER: US/09/872,856
; FILING DATE: 2001-06-01
; PRIOR APPLICATION NUMBER: US 09/124,180
; PRIOR FILING DATE: 1998-07-28
; PRIOR APPLICATION NUMBER: US 09/019,070
; PRIOR FILING DATE: 1998-02-05
; PRIOR APPLICATION NUMBER: US 08/862,445
; PRIOR FILING DATE: 1997-05-23
; PRIOR APPLICATION NUMBER: US 08/847,910
; PRIOR FILING DATE: 1997-04-28
; PRIOR APPLICATION NUMBER: US 08/795,071
; PRIOR FILING DATE: 1997-02-05
; PRIOR APPLICATION NUMBER: US 08/525,596
; PRIOR FILING DATE: 1995-10-25
; PRIOR APPLICATION NUMBER: PCT/US 94/03019
; PRIOR FILING DATE: 1994-03-18
; PRIOR APPLICATION NUMBER: US 08/033,923
; PRIOR FILING DATE: 1993-03-19
; NUMBER OF SEQ ID NOS: 53
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 41
; LENGTH: 119
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-872-856-41

Query Match      78.4%; Score 87; DB 10; Length 119;
Best Local Similarity 83.3%; Pred. No. 0.0006;
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY      3 PETVPRCCAPTQMAIS 20
       1:|||||:|||||
       76 PDHVPKPCAPTQMAIS 93

Db      76 PDHVPKPCAPTQMAIS 93

RESULT 151
US-10-335-483-23
; Sequence 23, Application US/10335483
; Publication No. US20030120058A1
; GENERAL INFORMATION:
; APPLICANT: Huynh, Thanh
; APPLICANT: Lee, Se-Jin
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-8
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Fish & Richardson P.C.
; STREET: 4225 Executive Square, Suite 1400
; CITY: La Jolla
; STATE: CA
; COUNTRY: US
; ZIP: 92037
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: Windows95
; SOFTWARE: FastSeq for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/335,483
; FILING DATE: 31-Dec-2002
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
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APPLICATION NUMBER: US/09/177,860  
FILING DATE: <Unknown>  
APPLICATION NUMBER: 08/525,596  
FILING DATE: 19-SEP-1995  
APPLICATION NUMBER: PCT/US94/07762  
FILING DATE: 08-JUL-1994  
ATTORNEY/AGENT INFORMATION:  
NAME: Wechereff, Jr., Ph.D, John R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: 07265/075001  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 619-678-5070  
TELEFAX: 619-678-5099  
INFORMATION FOR SEQ ID NO: 23:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: BMP-5  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
SEQUENCE DESCRIPTION: SEQ ID NO: 23:  
US-10-335-483-23

Query Match 78.4%; Score 87; DB 14; Length 119;  
Best Local Similarity 83.3%; Pred. No. 0.0006; 1; Indels 0; Gaps 0;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRCCAPTOLNAIS 20  
|:|||||:|||||  
Db 76 PDHVPKPCAPTOLNAIS 93

RESULT 152  
US-10-463-973-41  
Sequence 41, Application US/10463973  
Publication No. US20040055027A1  
GENERAL INFORMATION:  
APPLICANT: Johns Hopkins University School of Medicine  
APPLICANT: Lee, Se-jin  
TITLE OF INVENTION: Growth Differentiation Factor-8  
FILE REFERENCE: JHU1120-17  
CURRENT APPLICATION NUMBER: US/10/463,973  
PRIOR APPLICATION NUMBER: US/09/872,856  
PRIOR FILING DATE: 2001-06-01  
PRIOR APPLICATION NUMBER: US/09/124,180  
PRIOR FILING DATE: 1998-07-28  
PRIOR APPLICATION NUMBER: US/09/019,070  
PRIOR FILING DATE: 1998-02-05  
PRIOR APPLICATION NUMBER: US/08/862,445  
PRIOR FILING DATE: 1997-05-23  
PRIOR APPLICATION NUMBER: US/08/847,910  
PRIOR FILING DATE: 1997-04-28  
PRIOR APPLICATION NUMBER: US/08/795,071  
PRIOR FILING DATE: 1997-02-05  
PRIOR APPLICATION NUMBER: US/08/525,596  
PRIOR FILING DATE: 1995-10-25  
PRIOR APPLICATION NUMBER: PCT/US 94/03019  
PRIOR FILING DATE: 1994-03-18  
PRIOR APPLICATION NUMBER: US/08/033,923  
PRIOR FILING DATE: 1993-03-19  
NUMBER OF SEQ ID NOS: 53  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 41  
LENGTH: 119  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-463-973-41

Query Match 78.4%; Score 87; DB 15; Length 119;  
Best Local Similarity 83.3%; Pred. No. 0.0006; 1; Indels 0; Gaps 0;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRCCAPTOLNAIS 20  
|:|||||:|||||  
Db 76 PDHVPKPCAPTOLNAIS 93

RESULT 153  
US-10-693-536-13  
Sequence 13, Application US/10693536  
Publication No. US20040067556A1  
GENERAL INFORMATION:  
APPLICANT: Lee, Se-jin  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-6  
NUMBER OF SEQUENCES: 21  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Fish & Richardson  
STREET: 4225 Executive Square, Suite 1400  
CITY: La Jolla  
STATE: California  
COUNTRY: USA  
ZIP: 92037  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/693,536  
FILING DATE: 23-Oct-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/09/619,061  
FILING DATE: 18-Jul-2000  
APPLICATION NUMBER: US/09/097,616  
FILING DATE: 15-JUN-1998  
APPLICATION NUMBER: US/08/581,529  
FILING DATE: 15-APR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Lisa A. Haile, Ph.D.  
REGISTRATION NUMBER: 38,347  
REFERENCE/DOCKET NUMBER: 07265/082001  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 678-5070  
TELEFAX: (619) 678-5099  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: BMP-5  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
SEQUENCE DESCRIPTION: SEQ ID NO: 13:  
US-10-693-536-13

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RESULT 154
US-10-758-210-13
; Sequence 13, Application US/10758210
; Publication No. US20040127696A1
; GENERAL INFORMATION:
; APPLICANT: THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE
; APPLICANT: LEE, Se-Jin
; APPLICANT: HUTH, Thanh
; TITLE OF INVENTION: ANTIBODIES BINDING TO GROWTH DIFFERENTIATION FACTOR-7
; FILE REFERENCE: JHU1130-2
; CURRENT APPLICATION NUMBER: US/10/758,210
; CURRENT FILING DATE: 2004-01-14
; PRIOR APPLICATION NUMBER: US/09/412,791D
; PRIOR FILING DATE: 1999-10-05
; PRIOR APPLICATION NUMBER: US 08/561,528
; PRIOR FILING DATE: 1996-01-09
; PRIOR APPLICATION NUMBER: PCT/US94/07799
; PRIOR FILING DATE: 1994-07-08
; NUMBER OF SEQ ID NOS: 21
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 13
; LENGTH: 119
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-758-210-13

Query Match          78.4%; Score 87; DB 16; Length 119;
Best Local Similarity 83.3%; Pred. No. 0.0006;
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRKPCAPTLNMAIS 20
:|||||:|||||
Db 76 PDHVPRKPCAPTLNMAIS 93

RESULT 155
US-10-366-345-61
; Sequence 61, Application US/10366345
; Publication No. US20030224501A1
; GENERAL INFORMATION:
; APPLICANT: Young, et al.
; TITLE OF INVENTION: Bone Morphogenetic Protein Polynucleotides, Polypeptides and
; FILE REFERENCE: P1189
; CURRENT APPLICATION NUMBER: US/10/366,345
; CURRENT FILING DATE: 2003-02-14
; NUMBER OF SEQ ID NOS: 77
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 61
; LENGTH: 138
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-366-345-61

Query Match          78.4%; Score 87; DB 14; Length 138;
Best Local Similarity 83.3%; Pred. No. 0.00069;
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRKPCAPTLNMAIS 20
:|||||:|||||
Db 95 PDHVPRKPCAPTLNMAIS 112

RESULT 156
US-10-122-026-18
; Sequence 18, Application US/10122026
; Publication No. US20030105004A1
; GENERAL INFORMATION:
; APPLICANT: JONES, WILLIAM K
; APPLICANT: TUCKER, RONALD F
; APPLICANT: RUEGER, DAVID C
; APPLICANT: OPPERMAN, HERMANN
; APPLICANT: OZKAYNAK, ENGİN
```

```

; KUBERASAMPATH, THANGAVEL
; TITLE OF INVENTION: NOVEL MORPHOGENIC PROTEIN COMPOSITIONS
; OF MATTER
; NUMBER OF SEQUENCES: 23
; CORRESPONDENCE ADDRESS:
; ADDRESSER: Patent Administrator, Testa, Hurwitz &
; Thibault, LLP
; STREET: 125 HIGH STREET
; CITY: BOSTON
; STATE: MA
; COUNTRY: USA
; ZIP: 02110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/122,026
; FILING DATE: 29-Aug-2002
; CLASSIFICATION: <unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/402,542
; FILING DATE: 13-MAR-1995
; APPLICATION NUMBER: US 08/840,510
; FILING DATE: 31-MAR-1993
; APPLICATION NUMBER: US 08/029,335
; FILING DATE: 04-MAR-1993
; APPLICATION NUMBER: US 07/971,091
; FILING DATE: 03-NOV-1992
; APPLICATION NUMBER: US 07/946,235
; FILING DATE: 16-SEP-1992
; APPLICATION NUMBER: US 07/938,336
; FILING DATE: 28-AUG-1992
; APPLICATION NUMBER: US 07/923,780
; FILING DATE: 31-JUL-1992
; APPLICATION NUMBER: US 07/752,857
; FILING DATE: 30-AUG-1991
; APPLICATION NUMBER: US 07/752,764
; FILING DATE: 30-AUG-1991
; APPLICATION NUMBER: US 07/667,274
; FILING DATE: 11-MAR-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: CAMACHO, JENNIFER A.
; REGISTRATION NUMBER: 43,526
; REFERENCE/DOCKET NUMBER: STX-0600CN
; INFORMATION FOR SEQ ID NO: 18:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 453 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; FEATURE:
; NAME/KEY: Protein
; LOCATION: 1..453
; OTHER INFORMATION: /note= "PRE-PRO-BMP5 (HUMAN)"
; PUBLICATION INFORMATION:
; AUTHORS: CELESTE,
; JOURNAL: Proc. Natl. Acad. Sci. U.S.A.
; VOLUME: 87
; PAGES: 9843-9847
; DATE: 1991
; SEQUENCE DESCRIPTION: SEQ ID NO: 18:
US-10-122-026-18

Query Match          78.4%; Score 87; DB 14; Length 453;
Best Local Similarity 83.3%; Pred. No. 0.0022;
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRKPCAPTLNMAIS 20
:|||||:|||||
Db 410 PDHVPRKPCAPTLNMAIS 427
```

RESULT 157  
US-10-286-152A-6  
Sequence 6, Application US/10286152A  
Publication No. US20030134308A1  
GENERAL INFORMATION:  
APPLICANT: Alcon Research, Ltd.  
TITLE OF INVENTION: Bone Morphogenic Proteins (BMP), BMP Receptors and BMP Binding Peptides  
FILE REFERENCE: 2312 US  
CURRENT APPLICATION NUMBER: US/10/286,152A  
CURRENT FILING DATE: 2002-02-28  
NUMBER OF SEQ ID NOS: 54  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 6  
LENGTH: 454  
TYPE: PRT  
ORGANISM: homo sapiens  
US-10-286-152A-6

Query Match  
Best Local Similarity 78.4%; Score 87; DB 14; Length 454;  
Best Local Similarity 83.3%; Pred. No. 0.0022; 1; Indels 0; Gaps 0;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

OY 3 PETVPRCCAPTQNAIS 20  
DB 411 PDHVPKPCCAPTKLNAIS 428

RESULT 158  
US-10-164-279-29  
Sequence 29, Application US/10164279  
Publication No. US20030185792A1  
GENERAL INFORMATION:  
APPLICANT: Keck, P.  
TITLE OF INVENTION: MORPHOGEN ANALOGS OF BOND MORPHOGENIC PROTEINS  
FILE REFERENCE: CIBT-P04-566  
CURRENT APPLICATION NUMBER: US/10/164,279  
CURRENT FILING DATE: 2002-06-06  
PRIOR APPLICATION NUMBER: 09/791946  
PRIOR FILING DATE: 2001-02-22  
NUMBER OF SEQ ID NOS: 64  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 29  
LENGTH: 454  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-164-279-29

Query Match  
Best Local Similarity 78.4%; Score 87; DB 14; Length 454;  
Best Local Similarity 83.3%; Pred. No. 0.0022; 1; Indels 0; Gaps 0;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

OY 3 PETVPRCCAPTQNAIS 20  
DB 411 PDHVPKPCCAPTKLNAIS 428

RESULT 159  
US-10-366-345-37  
Sequence 37, Application US/10366345  
Publication No. US20030224501A1  
GENERAL INFORMATION:  
APPLICANT: Young et al.  
TITLE OF INVENTION: Bone Morphogenetic Protein Polynucleotides, Polypeptides and  
FILE REFERENCE: PT189  
CURRENT APPLICATION NUMBER: US/10/366,345  
CURRENT FILING DATE: 2003-02-14  
NUMBER OF SEQ ID NOS: 77  
SOFTWARE: PatentIn version 3.2

SEQ ID NO 37  
LENGTH: 454  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-366-345-37

Query Match  
Best Local Similarity 78.4%; Score 87; DB 14; Length 454;  
Best Local Similarity 83.3%; Pred. No. 0.0022; 1; Indels 0; Gaps 0;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

OY 3 PETVPRCCAPTQNAIS 20  
DB 411 PDHVPKPCCAPTKLNAIS 428

RESULT 160  
US-10-375-150-10  
Sequence 10, Application US/10375150  
Publication No. US20030235868A1  
GENERAL INFORMATION:  
APPLICANT: Israel, David  
TITLE OF INVENTION: Recombinant Bone Morphogenetic Protein  
FILE REFERENCE: 2312 US  
CURRENT APPLICATION NUMBER: US/10/375,150  
CURRENT FILING DATE: 2002-02-28  
NUMBER OF SEQ ID NOS: 54  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 10  
LENGTH: 454  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-375-150-10

Query Match  
Best Local Similarity 78.4%; Score 87; DB 14; Length 454;  
Best Local Similarity 83.3%; Pred. No. 0.0022; 1; Indels 0; Gaps 0;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

OY 3 PETVPRCCAPTQNAIS 20  
DB 411 PDHVPKPCCAPTKLNAIS 428

RESULT 161  
US-09-813-398-28  
Sequence 28, Application US/09813398  
Publication No. US20020169292A1  
GENERAL INFORMATION:  
APPLICANT: Keck, P.  
TITLE OF INVENTION: MORPHOGEN ANALOGS OF BOND MORPHOGENIC PROTEINS  
FILE REFERENCE: CIBT-P04-566  
CURRENT APPLICATION NUMBER: US/09/813,398  
CURRENT FILING DATE: 2002-06-06  
PRIOR APPLICATION NUMBER: 09/791946  
PRIOR FILING DATE: 2001-02-22  
NUMBER OF SEQ ID NOS: 64  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 28  
LENGTH: 454  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-813-398-28

Query Match  
Best Local Similarity 78.4%; Score 87; DB 14; Length 454;  
Best Local Similarity 83.3%; Pred. No. 0.0022; 1; Indels 0; Gaps 0;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

OY 3 PETVPRCCAPTQNAIS 20  
DB 411 PDHVPKPCCAPTKLNAIS 428

APPLICANT: Bruce D. Weitraub  
APPLICANT: Mariusz W. Szklinski  
APPLICANT: University of Maryland  
TITLE OF INVENTION: CYSTINE KNOT GROWTH FACTOR MUTANTS  
FILE REFERENCE: US/09/813,398  
CURRENT FILING DATE: 2001-03-20  
PRIOR APPLICATION NUMBER: US/09/813,398  
PRIOR FILING DATE: 1999-03-19  
PRIOR APPLICATION NUMBER: PCT/US99/05908  
PRIOR FILING DATE: 1998-09-22  
NUMBER OF SEQ ID NOS: 41  
SOFTWARE: PASTESEQ for Windows Version 4.0  
SEQ ID NO 28  
LENGTH: 455  
TYPE: PRT  
ORGANISM: HOMO SAPIEN  
US-09-813-398-28

Query Match 78.4%; Score 87; DB 9; Length 455;  
Best Local Similarity 83.3%; Pred. No. 0.0027;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRKCCAPTQNAIS 20  
DB 412 PDHVPKCCAPTQNAIS 429

RESULT 162  
US-09-754-831A-15  
Sequence 15, Application US/09754831A  
Publication No. US20030228345A1  
GENERAL INFORMATION:  
APPLICANT: Oppermann, Herman  
APPLICANT: Rueger, David, Thangavel  
APPLICANT: Ozkaynak, Engin  
TITLE OF INVENTION: Osteogenic Devices  
FILE REFERENCE: STR-008CN  
CURRENT APPLICATION NUMBER: US/09/754,831A  
CURRENT FILING DATE: 2001-01-03  
PRIOR APPLICATION NUMBER: US 08/375,901  
PRIOR FILING DATE: 1995-01-20  
PRIOR APPLICATION NUMBER: US 08/145,812  
PRIOR FILING DATE: 1993-11-01  
PRIOR APPLICATION NUMBER: US 07/995,345  
PRIOR FILING DATE: 1992-12-22  
PRIOR APPLICATION NUMBER: US 07/315,342  
PRIOR FILING DATE: 1989-02-23  
PRIOR APPLICATION NUMBER: US 07/232,630  
PRIOR FILING DATE: 1988-08-15  
PRIOR APPLICATION NUMBER: US 07/179,406  
PRIOR FILING DATE: 1988-04-08  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.0  
SEQ ID NO 15  
LENGTH: 97  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Biosynthetic COP4 protein with osteogenic activity  
US-09-754-831A-15

Query Match 74.8%; Score 83; DB 10; Length 97;  
Best Local Similarity 70.0%; Pred. No. 0.0017;  
Matches 14; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

QY 1 INPETHKCCAPTQNAIS 20  
DB 52 MNPGRKPCCVPTLSAIS 71

RESULT 163

US-09-754-831A-16  
Sequence 16, Application US/09754831A  
Publication No. US20030228345A1  
GENERAL INFORMATION:  
APPLICANT: Oppermann, Herman  
APPLICANT: Rueger, David, Thangavel  
APPLICANT: Ozkaynak, Engin  
TITLE OF INVENTION: Osteogenic Devices  
FILE REFERENCE: STR-008CN  
CURRENT APPLICATION NUMBER: US/09/754,831A  
CURRENT FILING DATE: 2001-01-03  
PRIOR APPLICATION NUMBER: US 08/375,901  
PRIOR FILING DATE: 1995-01-20  
PRIOR APPLICATION NUMBER: US 08/145,812  
PRIOR FILING DATE: 1993-11-01  
PRIOR APPLICATION NUMBER: US 07/995,345  
PRIOR FILING DATE: 1992-12-22  
PRIOR APPLICATION NUMBER: US 07/315,342  
PRIOR FILING DATE: 1989-02-23  
PRIOR APPLICATION NUMBER: US 07/232,630  
PRIOR FILING DATE: 1988-08-15  
PRIOR APPLICATION NUMBER: US 07/179,406  
PRIOR FILING DATE: 1988-04-08  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.0  
SEQ ID NO 16  
LENGTH: 97  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Biosynthetic COP16 protein with osteogenic activity  
US-09-754-831A-16

Query Match 74.8%; Score 83; DB 10; Length 97;  
Best Local Similarity 70.0%; Pred. No. 0.0017;  
Matches 14; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

QY 1 INPETHKCCAPTQNAIS 20  
DB 52 MNPGRKPCCVPTLSAIS 71

RESULT 164  
US-09-754-831A-13  
Sequence 13, Application US/09754831A  
Publication No. US20030228345A1  
GENERAL INFORMATION:  
APPLICANT: Oppermann, Herman  
APPLICANT: Rueger, David, Thangavel  
APPLICANT: Ozkaynak, Engin  
TITLE OF INVENTION: Osteogenic Devices  
FILE REFERENCE: STR-008CN  
CURRENT APPLICATION NUMBER: US/09/754,831A  
CURRENT FILING DATE: 2001-01-03  
PRIOR APPLICATION NUMBER: US 08/375,901  
PRIOR FILING DATE: 1995-01-20  
PRIOR APPLICATION NUMBER: US 08/145,812  
PRIOR FILING DATE: 1993-11-01  
PRIOR APPLICATION NUMBER: US 07/995,345  
PRIOR FILING DATE: 1992-12-22  
PRIOR APPLICATION NUMBER: US 07/315,342  
PRIOR FILING DATE: 1989-02-23  
PRIOR APPLICATION NUMBER: US 07/232,630  
PRIOR FILING DATE: 1988-08-15  
PRIOR APPLICATION NUMBER: US 07/179,406  
PRIOR FILING DATE: 1988-04-08  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.0  
SEQ ID NO 13  
LENGTH: 98  
TYPE: PRT

ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Biosynthetic COP1 protein with osteogenic activity  
US-09-754-831A-13

Query Match 74.8%; Score 83; DB 10; Length 98;  
Best Local Similarity 70.0%; Pred. No. 0.0017;  
Matches 14; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNLS 20  
DB 53 MNPGKVPKPCCVPTLSAIS 72

RESULT 165  
US-09-754-831A-14  
Sequence 14, Application US/09754831A  
Publication No. US20030228345A1  
GENERAL INFORMATION:  
APPLICANT: Oppermann, Herman  
APPLICANT: Kuberassampath, Thangavel  
APPLICANT: Rueger, David  
APPLICANT: Ozkaynak, Engin  
TITLE OF INVENTION: Osteogenic Devices  
FILE REFERENCE: STK-008CN  
CURRENT APPLICATION NUMBER: US/09/754,831A  
CURRENT FILING DATE: 2001-01-03  
PRIOR APPLICATION NUMBER: US 08/375,901  
PRIOR FILING DATE: 1995-01-20  
PRIOR APPLICATION NUMBER: US 08/145,812  
PRIOR FILING DATE: 1993-11-01  
PRIOR APPLICATION NUMBER: US 07/995,345  
PRIOR FILING DATE: 1992-12-22  
PRIOR APPLICATION NUMBER: US 07/315,342  
PRIOR FILING DATE: 1989-02-23  
PRIOR APPLICATION NUMBER: US 07/232,630  
PRIOR FILING DATE: 1988-08-15  
PRIOR APPLICATION NUMBER: US 07/179,406  
PRIOR FILING DATE: 1988-04-08  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.0  
SEQ ID NO 14  
LENGTH: 98  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Biosynthetic COP3 protein with osteogenic activity  
US-09-754-831A-14

Query Match 74.8%; Score 83; DB 10; Length 98;  
Best Local Similarity 70.0%; Pred. No. 0.0017;  
Matches 14; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNLS 20  
DB 53 MNPGKVPKPCCVPTLSAIS 72

RESULT 166  
US-09-754-831A-44  
Sequence 44, Application US/09754831A  
Publication No. US20030228345A1  
GENERAL INFORMATION:  
APPLICANT: Oppermann, Herman  
APPLICANT: Kuberassampath, Thangavel  
APPLICANT: Rueger, David  
APPLICANT: Ozkaynak, Engin  
TITLE OF INVENTION: Osteogenic Devices  
FILE REFERENCE: STK-008CN  
CURRENT APPLICATION NUMBER: US/09/754,831A  
CURRENT FILING DATE: 2001-01-03  
PRIOR APPLICATION NUMBER: US 08/375,901  
PRIOR FILING DATE: 1995-01-20

PRIOR APPLICATION NUMBER: US 08/145,812  
PRIOR FILING DATE: 1993-11-01  
PRIOR APPLICATION NUMBER: US 07/995,345  
PRIOR FILING DATE: 1992-12-22  
PRIOR APPLICATION NUMBER: US 07/315,342  
PRIOR FILING DATE: 1989-02-23  
PRIOR APPLICATION NUMBER: US 07/232,630  
PRIOR FILING DATE: 1988-08-15  
PRIOR APPLICATION NUMBER: US 07/179,406  
PRIOR FILING DATE: 1988-04-08  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.0  
SEQ ID NO 44  
LENGTH: 102  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: COPO  
US-09-754-831A-44

Query Match 74.8%; Score 83; DB 10; Length 102;  
Best Local Similarity 70.0%; Pred. No. 0.0017;  
Matches 14; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNLS 20  
DB 57 MNPGKVPKPCCVPTLSAIS 76

RESULT 167  
US-10-619-910-8  
Sequence 8, Application US/10619910  
Publication No. US20040053844A1  
GENERAL INFORMATION:  
APPLICANT: Kyocera Corporation  
APPLICANT: Nishimura, Yoshiniko  
APPLICANT: Suzuki, Yoshinaka  
APPLICANT: Tanihata, Masao  
TITLE OF INVENTION: A peptide and Osteogenic Accelerator  
FILE REFERENCE: 81918-0001  
CURRENT APPLICATION NUMBER: US/10/619,910  
CURRENT FILING DATE: 2003-07-15  
PRIOR APPLICATION NUMBER: US/09/439,779B  
PRIOR FILING DATE: 2001-09-10  
NUMBER OF SEQ ID NOS: 11  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 8  
LENGTH: 20  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Synthesized peptide  
FEATURE:  
NAME/KEY: MISC FEATURE  
LOCATION: (5)..(5)  
OTHER INFORMATION: Xaa=Lys, Ser or Thr  
FEATURE:  
NAME/KEY: MISC FEATURE  
LOCATION: (6)..(6)  
OTHER INFORMATION: Xaa=Ile or Val  
FEATURE:  
NAME/KEY: MISC FEATURE  
LOCATION: (9)..(9)  
OTHER INFORMATION: Xaa=Ala or Pro  
FEATURE:  
NAME/KEY: MISC FEATURE  
LOCATION: (12)..(12)  
OTHER INFORMATION: Xaa=Ala or Val  
FEATURE:  
NAME/KEY: MISC FEATURE  
LOCATION: (17)..(17)  
OTHER INFORMATION: Xaa=Ser or Asn  
US-10-619-910-8

Query Match 71.2%; Score 79; DB 15; Length 20;  
Best Local Similarity 70.0%; Pred. No. 0.0012;  
Matches 14; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 1 INPETHKPCCAPTOLNAIS 20

## RESULT 168

US-10-619-910-4  
; Sequence 4, Application US/10619910  
; Publication No. US2004005384A1  
; GENERAL INFORMATION:  
; APPLICANT: Kyocera Corporation  
; APPLICANT: Nishimura, Yoshiniko  
; APPLICANT: Suzuki, Yoshihisa  
; APPLICANT: Tanihara, Masao  
; TITLE OF INVENTION: A Peptide and Osteogenic Accelerator  
; FILE REFERENCE: 81918-0001  
; CURRENT APPLICATION NUMBER: US/10/619,910  
; CURRENT FILING DATE: 2003-07-15  
; PRIOR APPLICATION NUMBER: US/09/439,779B  
; PRIOR FILING DATE: 2001-09-10  
; NUMBER OF SEQ ID NOS: 11  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 4  
; LENGTH: 22  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Synthesized peptide  
; NAME/KEY: MISC\_FEATURE  
; LOCATION: (7)..(7)  
; OTHER INFORMATION: Xaa=Iys, Ser or Thr  
; FEATURE:  
; NAME/KEY: MISC\_FEATURE  
; LOCATION: (8)..(8)  
; OTHER INFORMATION: Xaa=Ile or Val  
; FEATURE:  
; NAME/KEY: MISC\_FEATURE  
; LOCATION: (11)..(11)  
; OTHER INFORMATION: Xaa=Ala or Pro  
; FEATURE:  
; NAME/KEY: MISC\_FEATURE  
; LOCATION: (14)..(14)  
; OTHER INFORMATION: Xaa=Ala or Val  
; FEATURE:  
; NAME/KEY: MISC\_FEATURE  
; LOCATION: (19)..(19)  
; OTHER INFORMATION: Xaa= Ser or Asn  
US-10-619-910-4

Query Match 70.3%; Score 78; DB 15; Length 22;  
Best Local Similarity 65.0%; Pred. No. 0.0018;  
Matches 13; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 3 VNPETHKPCCAPTOLNAIS 22

## RESULT 169

US-10-187-394-9  
; Sequence 9, Application US/10187394  
; Publication No. US20030176667A1  
; GENERAL INFORMATION:  
; APPLICANT: KECK, PETER  
; APPLICANT: SMART, JOHN  
; TITLE OF INVENTION: SINGLE CHAIN ANALOGS OF TGF-B  
; TITLE OF INVENTION: SUPERFAMILY (MORPHONS)

NUMBER OF SEQUENCES: 45  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR; TESTA, HURWITZ &  
ADDRESSEE: THIBEAULT, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA

## ZIP: 02110

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/187,394  
FILING DATE: 28-JUNE-2002

## CLASSIFICATION:

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/09/496,398  
FILING DATE: 02-FEB-2000

## CLASSIFICATION:

APPLICATION NUMBER: US 08/478,097  
FILING DATE: 07-JUN-1995

## CLASSIFICATION:

ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, ESO, EDMUND R  
REGISTRATION NUMBER: 27,829

REFERENCE/DOCKET NUMBER: STX-059CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-248-7000  
TELEFAX: 617-248-7100

## INFORMATION FOR SEQ ID NO: 9:

## SEQUENCE CHARACTERISTICS:

LENGTH: 102 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

FEATURE:  
NAME/KEY: Protein

LOCATION: 1..102

OTHER INFORMATION: /note="60A SEQUENCE"

Query Match 69.4%; Score 77; DB 14; Length 102;  
Best Local Similarity 63.2%; Pred. No. 0.011;  
Matches 12; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAI 19  
Db 57 LEPKVPKPCCAPTRLGAL 75

## RESULT 170

US-09-389-705-14  
; Sequence 14, Application US/09389705  
; Publication No. US20010018509A1  
; GENERAL INFORMATION:  
; APPLICANT: JOHNS HOPKINS UNIVERSITY  
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3  
; NUMBER OF SEQUENCES: 29  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: SPENSLEY HORN JUBAS & LUBITZ  
; STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR  
; CITY: LOS ANGELES  
; STATE: CALIFORNIA  
; COUNTRY: USA  
; ZIP: 90067  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS



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SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
  APPLICATION NUMBER: US/09/389,705
  FILING DATE: 03-Sep-1999
  CLASSIFICATION: <Unknown>
  PRIOR APPLICATION DATA:
    APPLICATION NUMBER: 09/153,733
    FILING DATE: <Unknown>
  ATTORNEY/AGENT INFORMATION:
    NAME: WETHERELL, JR. Ph.D., JOHN R.
    REGISTRATION NUMBER: 31,678
    REFERENCE/DOCKET NUMBER: FD2279 PCT
  TELECOMMUNICATION INFORMATION:
    TELEPHONE: (619) 455-5100
    TELEFAX: (619) 455-5110
  INFORMATION FOR SEQ ID NO: 14:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 118 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
      MOLECULE TYPE: protein
      IMMEDIATE SOURCE:
        CLONE: 60A
      FEATURE:
        NAME/KEY: Protein
        LOCATION: 1..118
      SEQUENCE DESCRIPTION: SEQ ID NO: 14:
US-09-389-705-14

Query Match      69.4%; Score 77; DB 9; Length 118;
Best Local Similarity 63.2%; Pred. No. 0.012;
Matches 12; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

QY      1 INPETHKPCCAPTOLNMI 19
Db      73 LEPKVKVPCCAPTRLGAL 91

RESULT 171
US-10-115-406-12
  Sequence 12, Application US/10115406
  Publication No. US20020127612A1
  GENERAL INFORMATION:
    APPLICANT: THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE
    APPLICANT: LEE, Se-Jin
    TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9
    FILE REFERENCE: JH01190-3
    CURRENT APPLICATION NUMBER: US/10/115,406
    PRIOR APPLICATION NUMBER: 09/301,520
    PRIOR FILING DATE: 2002-04-02
    PRIOR APPLICATION NUMBER: US 09/172,062
    PRIOR FILING DATE: 1999-04-28
    PRIOR FILING DATE: 1998-10-13
    PRIOR APPLICATION NUMBER: US 08/491,835
    PRIOR FILING DATE: 1995-10-23
    PRIOR APPLICATION NUMBER: PCT/US94/00685
    PRIOR FILING DATE: 1994-01-12
    PRIOR APPLICATION NUMBER: US 08/003,303
    PRIOR FILING DATE: 1993-01-12
    NUMBER OF SEQ ID NOS: 28
    SOFTWARE: Patentin version 3.0
    SEQ ID NO 12
    LENGTH: 118
    TYPE: PRT
  ORGANISM: Drosophila melanogaster
US-10-115-406-12

Query Match      69.4%; Score 77; DB 13; Length 118;
Best Local Similarity 63.2%; Pred. No. 0.012;
Matches 12; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

QY      1 INPETHKPCCAPTOLNMI 19
```

```
Db      73 LEPKVKVPCCAPTRLGAL 91

RESULT 172
US-10-154-333-14
  Sequence 14, Application US/10154333
  Publication No. US20030109684A1
  GENERAL INFORMATION:
    APPLICANT: JOHNS HOPKINS UNIVERSITY
    TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3
    NUMBER OF SEQUENCES: 29
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: SPENSLEY HORN JUBAS & LUBITZ
      STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR
      CITY: LOS ANGELES
      STATE: CALIFORNIA
      COUNTRY: US
      ZIP: 90067
  COMPUTER READABLE FORM:
    MEDIUM TYPE: Floppy disk
    COMPUTER: IBM PC compatible
    OPERATING SYSTEM: PC-DOS/MS-DOS
    SOFTWARE: Patentin Release #1.0, Version #1.25
  CURRENT APPLICATION DATA:
    APPLICATION NUMBER: US/10/154,333
    FILING DATE: 21-May-2002
    CLASSIFICATION: <Unknown>
  PRIOR APPLICATION DATA:
    APPLICATION NUMBER: US/09/389,705
    FILING DATE: 03-Sep-1999
    APPLICATION NUMBER: 09/153,733
    FILING DATE: <Unknown>
  ATTORNEY/AGENT INFORMATION:
    NAME: WETHERELL, JR. Ph.D., JOHN R.
    REGISTRATION NUMBER: 31,678
    REFERENCE/DOCKET NUMBER: FD2279 PCT
  TELECOMMUNICATION INFORMATION:
    TELEPHONE: (619) 455-5100
    TELEFAX: (619) 455-5110
  INFORMATION FOR SEQ ID NO: 14:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 118 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
      MOLECULE TYPE: protein
      IMMEDIATE SOURCE:
        CLONE: 60A
      FEATURE:
        NAME/KEY: Protein
        LOCATION: 1..118
      SEQUENCE DESCRIPTION: SEQ ID NO: 14:
US-10-154-333-14

Query Match      69.4%; Score 77; DB 14; Length 118;
Best Local Similarity 63.2%; Pred. No. 0.012;
Matches 12; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

QY      1 INPETHKPCCAPTOLNMI 19
Db      73 LEPKVKVPCCAPTRLGAL 91

RESULT 173
US-10-704-223-12
  Sequence 12, Application US/10704223
  Publication No. US20040152143A1
  GENERAL INFORMATION:
    APPLICANT: THE JOHNS HOPKINS UNIVERSITY
    APPLICANT: LEE, Se-Jin
    TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9
    FILE REFERENCE: JH01190-7
```

;; CURRENT APPLICATION NUMBER: US/10/704,223  
;; CURRENT FILING DATE: 2003-11-07  
;; PRIOR APPLICATION NUMBER: US 10/115,406  
;; PRIOR FILING DATE: 2002-04-02  
;; PRIOR APPLICATION NUMBER: US 09/301,520  
;; PRIOR FILING DATE: 1999-04-28  
;; PRIOR APPLICATION NUMBER: US 09/172,062  
;; PRIOR FILING DATE: 1998-10-13  
;; PRIOR APPLICATION NUMBER: US 08/491,835  
;; PRIOR FILING DATE: 1995-10-23  
;; PRIOR APPLICATION NUMBER: PCT/US94/00685  
;; PRIOR FILING DATE: 1994-01-12  
;; PRIOR APPLICATION NUMBER: US 08/003,303  
;; PRIOR FILING DATE: 1993-01-12  
;; NUMBER OF SEQ ID NOS: 28  
;; SOFTWARE: PatentIn version 3.1  
;; SEQ ID NO 12  
;; LENGTH: 118  
;; TYPE: PRT  
;; ORGANISM: Drosophila melanogaster  
US-10-704-223-12

Query Match 69.4%; Score 77; DB 16; Length 118;  
Best Local Similarity 63.2%; Pred. No. 0.012;  
Matches 12; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQLNAI 19  
DB 73 LEKXVPRKPCCAPTRLGAL 91

RESULT 174  
US-08-260-675-25  
;; Sequence 25, Application US/08260675  
;; Publication No. US20030104999A1  
;; GENERAL INFORMATION:  
;; APPLICANT: RUEGER, DAVID C  
;; APPLICANT: KUBERSAMPATH, THIANGAVEL  
;; APPLICANT: OPPERMANN, HERMANN  
;; APPLICANT: OZKAYNAK, ENGIN  
;; APPLICANT: PANG, ROY HL  
;; APPLICANT: COHEN, CHARLES M  
;; TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
;; TITLE OF INVENTION: REPAIR  
;; NUMBER OF SEQUENCES: 33  
;; CORRESPONDENCE ADDRESS:  
;; ADDRESSEE: TESTA HURWITZ & THIBEAULT  
;; STREET: 55 STATE STREET  
;; CITY: BOSTON  
;; STATE: MA  
;; COUNTRY: USA  
;; ZIP: 02140  
;; COMPUTER READABLE FORM:  
;; MEDIUM TYPE: floppy disk  
;; COMPUTER: IBM PC compatible  
;; OPERATING SYSTEM: PC-DOS/MS-DOS  
;; SOFTWARE: PatentIn Release #1.0, Version #1.25  
;; CURRENT APPLICATION DATA:  
;; APPLICATION NUMBER: US/08/260,675  
;; FILING DATE:  
;; CLASSIFICATION: 435  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US/08/126,100  
;; FILING DATE:  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US/07/922,813  
;; FILING DATE:  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 07/667,274  
;; FILING DATE: 11-MAR-1991  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 07/752,764  
;; FILING DATE: 30-AUG-1991

;; ATTORNEY/AGENT INFORMATION:  
;; NAME: PITCHER ESQ, EDMUND R  
;; REGISTRATION NUMBER: 27,829  
;; REFERENCE/DOCKET NUMBER: CRP-070  
;; TELECOMMUNICATION INFORMATION:  
;; TELEPHONE: 617/248-7000  
;; TELEFAX: 617/248-7100  
;; INFORMATION FOR SEQ ID NO: 25:  
;; SEQUENCE CHARACTERISTICS:  
;; LENGTH: 455 amino acids  
;; TYPE: amino acid  
;; TOPOLOGY: linear  
;; MOLECULE TYPE: protein  
US-08-260-675-25

Query Match 69.4%; Score 77; DB 8; Length 455;  
Best Local Similarity 63.2%; Pred. No. 0.044;  
Matches 12; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQLNAI 19  
DB 410 LEKXVPRKPCCAPTRLGAL 428

RESULT 175  
US-09-952-318A-25  
;; Sequence 25, Application US/09952318A  
;; Publication No. US20030224979A1  
;; GENERAL INFORMATION:  
;; APPLICANT: Kubersampath et al.  
;; TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR INCREASE BONE MASS IN  
;; FILE REFERENCE: JJJ-P06-522  
;; CURRENT APPLICATION NUMBER: US/09/952,318A  
;; CURRENT FILING DATE: 2001-09-13  
;; PRIOR APPLICATION NUMBER: 09/170,936  
;; PRIOR FILING DATE: 1998-10-13  
;; PRIOR APPLICATION NUMBER: 08/432,883  
;; PRIOR FILING DATE: 1995-05-02  
;; PRIOR APPLICATION NUMBER: 08/115,914  
;; PRIOR FILING DATE: 1993-09-01  
;; PRIOR APPLICATION NUMBER: 07/923,780  
;; PRIOR FILING DATE: 1992-07-31  
;; PRIOR APPLICATION NUMBER: 07/752,847  
;; PRIOR FILING DATE: 1991-08-30  
;; PRIOR APPLICATION NUMBER: 07/667,274  
;; PRIOR FILING DATE: 1991-03-11  
;; NUMBER OF SEQ ID NOS: 33  
;; SOFTWARE: PatentIn version 3.1  
;; SEQ ID NO 25  
;; LENGTH: 455  
;; TYPE: PRT  
;; ORGANISM: Drosophila melanogaster  
US-09-952-318A-25

Query Match 69.4%; Score 77; DB 10; Length 455;  
Best Local Similarity 63.2%; Pred. No. 0.044;  
Matches 12; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQLNAI 19  
DB 410 LEKXVPRKPCCAPTRLGAL 428

RESULT 176  
US-10-122-026-16  
;; Sequence 16, Application US/10122026  
;; Publication No. US20030105004A1  
;; GENERAL INFORMATION:  
;; APPLICANT: JONES, WILLIAM K  
;; TUCKER, RONALD F  
;; RUEGER, DAVID C  
;; OPPERMANN, HERMANN



```
APPLICANT: Tanihara, Masao
TITLE OF INVENTION: A Peptide and Osteogenetic Accelerator
FILE REFERENCE: 81918-0001
CURRENT APPLICATION NUMBER: US/10/619,910
CURRENT FILING DATE: 2003-07-15
PRIOR APPLICATION NUMBER: US/09/439,779B
PRIOR FILING DATE: 2001-09-10
NUMBER OF SEQ ID NOS: 11
SOFTWARE: PatentIn version 3.1
SEQ ID NO 7
LENGTH: 19
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Synthesized peptide
NAME/KEY: MISC_FEATURE
LOCATION: (5)..(5)
OTHER INFORMATION: Xaa=Ile or Thr
FEATURE:
NAME/KEY: MISC_FEATURE
LOCATION: (6)..(6)
OTHER INFORMATION: Xaa=Ile or Val
FEATURE:
NAME/KEY: MISC_FEATURE
LOCATION: (9)..(9)
OTHER INFORMATION: Xaa=Ala or Pro
FEATURE:
NAME/KEY: MISC_FEATURE
LOCATION: (12)..(12)
OTHER INFORMATION: Xaa=Ala or Val
FEATURE:
NAME/KEY: MISC_FEATURE
LOCATION: (17)..(17)
OTHER INFORMATION: Xaa=Ser or Asn
US-10-619-910-7

Query Match      67.6%; Score 75; DB 15; Length 19;
Best Local Similarity 68.4%; Pred. No. 0.0039;
Matches 13; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

QY      1 INPETHKPCAPPTQNLAI 19
DB      1 INPETHKPCAPPTQNLAI 19

RESULT 179
US-10-619-910-3
Sequence 3, Application US/10619910
Publication No. US20040053844A1
GENERAL INFORMATION:
APPLICANT: Kyocera Corporation
APPLICANT: Nishimura, Yoshihiko
APPLICANT: Suzuki, Yoshihisa
APPLICANT: Tanihara, Masao
TITLE OF INVENTION: A Peptide and Osteogenetic Accelerator
FILE REFERENCE: 81918-0001
CURRENT APPLICATION NUMBER: US/10/619,910
CURRENT FILING DATE: 2003-07-15
PRIOR APPLICATION NUMBER: US/09/439,779B
PRIOR FILING DATE: 2001-09-10
NUMBER OF SEQ ID NOS: 11
SOFTWARE: PatentIn version 3.1
SEQ ID NO 3
LENGTH: 21
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Synthesized peptide
NAME/KEY: MISC_FEATURE
LOCATION: (7)..(7)
OTHER INFORMATION: Xaa=Lys, Ser or Thr
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FEATURE:
NAME/KEY: MISC_FEATURE
LOCATION: (8)..(8)
OTHER INFORMATION: Xaa=Ile or Val
FEATURE:
NAME/KEY: MISC_FEATURE
LOCATION: (11)..(11)
OTHER INFORMATION: Xaa=Ala or Pro
FEATURE:
NAME/KEY: MISC_FEATURE
LOCATION: (14)..(14)
OTHER INFORMATION: Xaa=Ala or Val
FEATURE:
NAME/KEY: MISC_FEATURE
LOCATION: (19)..(19)
OTHER INFORMATION: Xaa=Ser or Asn
US-10-619-910-3

Query Match      66.7%; Score 74; DB 15; Length 21;
Best Local Similarity 69.2%; Pred. No. 0.0058;
Matches 12; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

QY      1 INPETHKPCAPPTQNLAI 19
DB      3 VNPETHKPCAPPTQNLAI 21

RESULT 180
US-10-074-978A-301
Sequence 301, Application US/10074978A
Publication No. US20040010119A1
GENERAL INFORMATION:
APPLICANT: Lete, Mario
APPLICANT: Spytek, Kimberly A
APPLICANT: Guo, Xiaojia (Sasha)
APPLICANT: Fernandes, Elma
APPLICANT: Li, Li
APPLICANT: Kekuda, Ramesh
APPLICANT: Liu, Xiahong
APPLICANT: Casman, Stacie
APPLICANT: Boldog, Perenc
APPLICANT: Paturajan, Weera
APPLICANT: Blalock, Angela
APPLICANT: Ballinger, Robert
APPLICANT: Vernet, Corine
APPLICANT: Tcherenev, Velizar T
APPLICANT: Malyankar, Uriel M
APPLICANT: Gusev, Vladimir
APPLICANT: Rastelli, Luca
APPLICANT: Mezes, Peter S
APPLICANT: Ellerman, Karen
APPLICANT: Heyes, Melvin P
APPLICANT: Herrman, John
APPLICANT: Pena, Carol E A
APPLICANT: Shimkets, Richard A
APPLICANT: Taupier Jr, Raymond J
APPLICANT: Moore, No. US20040010119A111e
APPLICANT: Shenoy, Suresh
APPLICANT: Edinger, Shlomit
APPLICANT: Gunther, Erik
APPLICANT: Stone, Dave
APPLICANT: Millet, Isabelle
APPLICANT: Peyman, John
APPLICANT: Smithson, Glenda
TITLE OF INVENTION: NOVEL PROTEINS AND NUCLEIC ACIDS ENCODING SAME
FILE REFERENCE: 21402-269
CURRENT APPLICATION NUMBER: US/10/074,978A
CURRENT FILING DATE: 2003-01-07
PRIOR APPLICATION NUMBER: 60/258,221
PRIOR FILING DATE: 2001-02-12
PRIOR APPLICATION NUMBER: 60/335,109
PRIOR FILING DATE: 2001-10-31
PRIOR APPLICATION NUMBER: 60/312,284
```

PRIOR FILING DATE: 2001-08-14  
PRIOR APPLICATION NUMBER: 60/268,496  
PRIOR FILING DATE: 2001-02-13  
PRIOR APPLICATION NUMBER: 60/276,703  
PRIOR FILING DATE: 2001-03-16  
PRIOR APPLICATION NUMBER: 60/350,293  
PRIOR FILING DATE: 2001-10-18  
PRIOR APPLICATION NUMBER: 60/322,127  
PRIOR FILING DATE: 2001-11-21  
PRIOR APPLICATION NUMBER: 60/280,899  
PRIOR FILING DATE: 2001-04-02  
PRIOR APPLICATION NUMBER: 60/310,797  
PRIOR FILING DATE: 2001-08-08  
PRIOR APPLICATION NUMBER: 60/268,646  
PRIOR FILING DATE: 2001-02-14  
Remaining Prior Application data removed - See File Wrapper or PALM.  
NUMBER OF SEQ ID NOS: 547  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 301  
LENGTH: 102  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-074-978A-301

Query Match 65.8%; Score 73; DB 15; Length 102;  
Best Local Similarity 57.9%; Pred. No. 0.036;  
Matches 11; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 2 NPETVPKPCCAPTOLNAIS 20  
|||:|||||:|:|:  
Db 58 NPRAVPOPCCVPTKLSPLS 76

RESULT 181  
US-10-080-334-209  
Sequence 209, Application US/10080334  
Publication No. US20040002584A1  
GENERAL INFORMATION:  
APPLICANT: Pena, Carol E. A.  
APPLICANT: Shimkets, Richard A  
APPLICANT: Li, Li  
APPLICANT: Shenoy, Suresh G  
APPLICANT: Kekuda, Ramesh  
APPLICANT: Spytek, Kimberly A  
APPLICANT: Vernet, Corine A. M.  
APPLICANT: Malyankar, Uriel M  
APPLICANT: Guo, Xiaojia  
APPLICANT: Gusev, Vladimir Y  
APPLICANT: Stacie J  
APPLICANT: Boldog, Ferenc L  
APPLICANT: Furtak, Katarzyna  
APPLICANT: Tchernev, Velizar T  
APPLICANT: Patturajan, Meera  
APPLICANT: Gangoli, Esba A  
APPLICANT: Padigaru, Muralidhara  
APPLICANT: Liu, Xiaohong  
APPLICANT: Baumgartner, Jason C.  
APPLICANT: Gerlach, Valerie  
APPLICANT: Spaderna, Steven K  
APPLICANT: Zernusen, Bryan D  
TITLE OF INVENTION: Proteins, Polynucleotides Encoding Them and Methods of  
FILE REFERENCE: 21402-275  
CURRENT APPLICATION NUMBER: US/10/080,334  
PRIOR FILING DATE: 2002-02-21  
PRIOR APPLICATION NUMBER: 60/270,523  
PRIOR FILING DATE: 2001-02-21  
PRIOR APPLICATION NUMBER: 60/322,712  
PRIOR FILING DATE: 2001-09-17  
PRIOR APPLICATION NUMBER: 60/311,980  
PRIOR FILING DATE: 2001-08-13  
PRIOR APPLICATION NUMBER: 60/330,307  
PRIOR FILING DATE: 2001-10-18

PRIOR APPLICATION NUMBER: 60/278,796  
PRIOR FILING DATE: 2001-03-26  
PRIOR APPLICATION NUMBER: 60/281,521  
PRIOR FILING DATE: 2001-04-04  
PRIOR APPLICATION NUMBER: 60/276,677  
PRIOR FILING DATE: 2001-03-16  
PRIOR APPLICATION NUMBER: 60/311,595  
PRIOR FILING DATE: 2001-08-10  
PRIOR APPLICATION NUMBER: 60/270,220  
PRIOR FILING DATE: 2001-02-21  
PRIOR APPLICATION NUMBER: 60/274,295  
PRIOR FILING DATE: 2001-03-08  
PRIOR APPLICATION NUMBER: 60/318,526  
PRIOR FILING DATE: 2001-09-10  
PRIOR APPLICATION NUMBER: 60/286,548  
PRIOR FILING DATE: 2001-04-25  
PRIOR APPLICATION NUMBER: 60/291,765  
PRIOR FILING DATE: 2001-05-17  
PRIOR APPLICATION NUMBER: 60/270,797  
PRIOR FILING DATE: 2001-02-23  
PRIOR APPLICATION NUMBER: 60/276,400  
PRIOR FILING DATE: 2001-03-16  
PRIOR APPLICATION NUMBER: 60/270,810  
PRIOR FILING DATE: 2001-02-23  
NUMBER OF SEQ ID NOS: 388  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 209  
LENGTH: 105  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-080-334-209

Query Match 65.8%; Score 73; DB 15; Length 105;  
Best Local Similarity 57.9%; Pred. No. 0.037;  
Matches 11; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 2 NPETVPKPCCAPTOLNAIS 20  
|||:|||||:|:|:  
Db 61 NPRAVPOPCCVPTKLSPLS 79

RESULT 182  
US-10-072-012-832  
Sequence 832, Application US/10072012  
Publication No. US20040033493A1  
GENERAL INFORMATION:  
APPLICANT: Tchernev, Velizar  
APPLICANT: Spytek, Kimberly  
APPLICANT: Zernusen, Bryan  
APPLICANT: Patturajan, Meera  
APPLICANT: Shimkets, Richard  
APPLICANT: Li, Li  
APPLICANT: Gangoli, Esba  
APPLICANT: Padigaru, Muralidhara  
APPLICANT: Anderson, David W.  
APPLICANT: Rastelli, Luca  
APPLICANT: Miller, Charles E.  
APPLICANT: Gerlach, Valerie  
APPLICANT: Taubier, Jr., Raymond J.  
APPLICANT: Gusev, Vladimir Y.  
APPLICANT: Colman, Steven D.  
APPLICANT: Wolenc, Adam R.  
APPLICANT: Pena, Carol E. A  
APPLICANT: Furtak, Katarzyna  
APPLICANT: Grosse, William M.  
APPLICANT: Alsobrook II, John P.  
APPLICANT: Lepley, Denise M.  
APPLICANT: Rieger, Daniel K.  
APPLICANT: Burgess, Catherine E.  
TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same  
FILE REFERENCE: 21402-258  
CURRENT APPLICATION NUMBER: US/10/072,012  
PRIOR FILING DATE: 2002-01-31

PRIOR APPLICATION NUMBER: 60/265,102  
PRIOR FILING DATE: 2001-01-30  
PRIOR APPLICATION NUMBER: 60/265,514  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,517  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,412  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,395  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/266,406  
PRIOR FILING DATE: 2001-02-02  
PRIOR APPLICATION NUMBER: 60/266,767  
PRIOR FILING DATE: 2001-02-05  
PRIOR APPLICATION NUMBER: 60/267,057  
PRIOR FILING DATE: 2001-02-07  
PRIOR APPLICATION NUMBER: 60/266,975  
PRIOR FILING DATE: 2001-02-07  
PRIOR APPLICATION NUMBER: 60/267,459  
PRIOR FILING DATE: 2001-02-08  
Remaining Prior Application data removed - See File Wrapper or PALM.  
NUMBER OF SEQ ID NOS: 1391  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 832  
LENGTH: 105  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Transforming  
OTHER INFORMATION: growth factor beta like domain  
US-10-072-012-832

Query Match 65.8%; Score 73; DB 15; Length 105;  
Best Local Similarity 57.9%; Pred. No. 0.037;  
Matches 11; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

OY 2 NPETVPRCCAPFQTLNALS 20  
DB 61 NPAVPPQCCVPTKLSPLS 79

## RESULT 183

US-10-072-012-834  
Sequence 834, Application US/10072012  
Publication No. US20040033493A1  
GENERAL INFORMATION:  
APPLICANT: Tchenev, Velizar  
APPLICANT: Spytek, Kimberly  
APPLICANT: Zehnusen, Bryan  
APPLICANT: Pattusajan, Meera  
APPLICANT: Shinkets, Richard  
APPLICANT: Li, Li  
APPLICANT: Gangoli, Esha  
APPLICANT: Padigaru, Muralidhara  
APPLICANT: Anderson, David W.  
APPLICANT: Rastelli, Luca  
APPLICANT: Miller, Charles E.  
APPLICANT: Gerlach, Valerie E.  
APPLICANT: Taupier Jr, Raymond J.  
APPLICANT: Gusev, Vladimir Y.  
APPLICANT: Coleman, Steven D.  
APPLICANT: Wolenc, Adam R.  
APPLICANT: Pena, Carol E. A  
APPLICANT: Putrak, Katarzyna  
APPLICANT: Grose, William M.  
APPLICANT: Alsobrook II, John P.  
APPLICANT: Lepley, Denise M.  
APPLICANT: Rieger, Daniel K.  
APPLICANT: Burgess, Catherine E.  
TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same  
FILE REFERENCE: 21402-258  
CURRENT APPLICATION NUMBER: US/10/072,012  
CURRENT FILING DATE: 2002-01-31

PRIOR APPLICATION NUMBER: 60/265,102  
PRIOR FILING DATE: 2001-01-30  
PRIOR APPLICATION NUMBER: 60/265,514  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,517  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,412  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,395  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/266,406  
PRIOR FILING DATE: 2001-02-02  
PRIOR APPLICATION NUMBER: 60/266,767  
PRIOR FILING DATE: 2001-02-05  
PRIOR APPLICATION NUMBER: 60/267,057  
PRIOR FILING DATE: 2001-02-07  
PRIOR APPLICATION NUMBER: 60/266,975  
PRIOR FILING DATE: 2001-02-07  
PRIOR APPLICATION NUMBER: 60/267,459  
PRIOR FILING DATE: 2001-02-08  
Remaining Prior Application data removed - See File Wrapper or PALM.  
NUMBER OF SEQ ID NOS: 1391  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 834  
LENGTH: 105  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Transforming  
OTHER INFORMATION: growth factor beta like domain  
US-10-072-012-834

Query Match 65.8%; Score 73; DB 15; Length 105;  
Best Local Similarity 57.9%; Pred. No. 0.037;  
Matches 11; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

OY 2 NPETVPRCCAPFQTLNALS 20  
DB 61 NPAVPPQCCVPTKLSPLS 79

## RESULT 184

US-09-930-512-77  
Sequence 77, Application US/09930512  
Publication No. US20040010118A1  
GENERAL INFORMATION:  
APPLICANT: Zehnusen, Bryan D  
APPLICANT: Padigaru, Muralidhara  
APPLICANT: Spytek, Kimberly  
APPLICANT: Spaderna, Steven  
APPLICANT: Gangoli, Esha A  
APPLICANT: Rastelli, Luca  
APPLICANT: Burgess, Catherine E  
APPLICANT: Majumder, Kunud  
APPLICANT: Shinkets, Richard  
APPLICANT: Mishra, Vishnu  
APPLICANT: Vernet, Corine  
APPLICANT: Szekeres, Edward S  
APPLICANT: Grose, William M  
APPLICANT: Alsobrook II, John P  
APPLICANT: Gerlach, Valerie L  
APPLICANT: Ellerman, Karen  
APPLICANT: Smithson, Glenda  
APPLICANT: Peyman, John  
APPLICANT: Stone, David  
APPLICANT: MacDougall, John  
TITLE OF INVENTION: No. US20040010118A1 Proteins and Nucleic Acids Encoding Same  
FILE REFERENCE: 21402-091  
CURRENT APPLICATION NUMBER: US/09/930,512  
CURRENT FILING DATE: 2001-08-15  
PRIOR APPLICATION NUMBER: 60/225,692  
PRIOR FILING DATE: 2000-08-16

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; PRIOR APPLICATION NUMBER: 60/225,837
; PRIOR FILING DATE: 2000-08-16
; PRIOR APPLICATION NUMBER: 60/225,693
; PRIOR FILING DATE: 2000-08-16
; PRIOR APPLICATION NUMBER: 60/226,236
; PRIOR FILING DATE: 2000-08-18
; PRIOR APPLICATION NUMBER: 60/226,353
; PRIOR FILING DATE: 2000-08-18
; PRIOR APPLICATION NUMBER: 60/227,085
; PRIOR FILING DATE: 2000-08-22
; PRIOR APPLICATION NUMBER: 60/227,335
; PRIOR FILING DATE: 2000-08-23
; PRIOR APPLICATION NUMBER: 60/227,492
; PRIOR FILING DATE: 2000-08-24
; PRIOR APPLICATION NUMBER: 60/227,600
; PRIOR FILING DATE: 2000-08-24
; PRIOR APPLICATION NUMBER: 60/275,952
; PRIOR FILING DATE: 2001-03-14
; NUMBER OF SEQ ID NOS: 115
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 77
; LENGTH: 102
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-330-512-77

Query Match      64.9%; Score 72; DB 11; Length 102;
Best Local Similarity 55.0%; Pred. No. 0.048;
Matches 11; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

QY      1 INPETHKPCCAPTQLNALS 20
DB      57 LDPGAVPRPCCVPTLSPLS 76

RESULT 185
US-10-080-334-210
; Sequence 210, Application US/10080334
; Publication No. US20040002584A1
; GENERAL INFORMATION:
; APPLICANT: Pena, Carol E. A.
; APPLICANT: Shimkets, Richard A
; APPLICANT: Li, Li
; APPLICANT: Shenoy, Suresh G
; APPLICANT: Kekuda, Ramesh
; APPLICANT: Spytek, Kimberly A
; APPLICANT: Verneet, Corine A. M.
; APPLICANT: Malyankar, Uriel M
; APPLICANT: Guo, Xiaojia
; APPLICANT: Gusev, Vladimir Y
; APPLICANT: Casman, Stacie J
; APPLICANT: Boldog, Ferenc L
; APPLICANT: Furtak, Katarzyna T
; APPLICANT: Tchernev, Velizar T
; APPLICANT: Patuzaajan, Meera
; APPLICANT: Gangoli, Esha A
; APPLICANT: Padigaru, Muralidhara
; APPLICANT: Liu, Xiaohong
; APPLICANT: Baumgartner, Jason C.
; APPLICANT: Gerlach, Valerie
; APPLICANT: Spaderna, Steven K
; APPLICANT: Zehrsen, Bryan D
; TITLE OF INVENTION: Proteins, Polynucleotides Encoding Them and Methods of
; FILE REFERENCE: 21402-275
; CURRENT APPLICATION NUMBER: US/10/080,334
; PRIOR FILING DATE: 2002-02-21
; PRIOR APPLICATION NUMBER: 60/270,523
; PRIOR FILING DATE: 2001-02-21
; PRIOR APPLICATION NUMBER: 60/322,712
; PRIOR FILING DATE: 2001-09-17
; PRIOR APPLICATION NUMBER: 60/311,960
; PRIOR FILING DATE: 2001-06-13
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; PRIOR APPLICATION NUMBER: 60/330,307
; PRIOR FILING DATE: 2001-10-18
; PRIOR APPLICATION NUMBER: 60/278,796
; PRIOR FILING DATE: 2001-03-26
; PRIOR APPLICATION NUMBER: 60/281,521
; PRIOR FILING DATE: 2001-04-04
; PRIOR APPLICATION NUMBER: 60/276,677
; PRIOR FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: 60/311,595
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: 60/270,220
; PRIOR FILING DATE: 2001-02-21
; PRIOR APPLICATION NUMBER: 60/274,295
; PRIOR FILING DATE: 2001-03-08
; PRIOR APPLICATION NUMBER: 60/318,526
; PRIOR FILING DATE: 2001-09-10
; PRIOR APPLICATION NUMBER: 60/286,548
; PRIOR FILING DATE: 2001-04-25
; PRIOR APPLICATION NUMBER: 60/291,765
; PRIOR FILING DATE: 2001-05-17
; PRIOR APPLICATION NUMBER: 60/270,797
; PRIOR FILING DATE: 2001-02-23
; PRIOR APPLICATION NUMBER: 60/276,400
; PRIOR FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: 60/270,810
; PRIOR FILING DATE: 2001-02-23
; NUMBER OF SEQ ID NOS: 388
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 210
; LENGTH: 102
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-080-334-210

Query Match      64.9%; Score 72; DB 15; Length 102;
Best Local Similarity 55.0%; Pred. No. 0.048;
Matches 11; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

QY      1 INPETHKPCCAPTQLNALS 20
DB      57 LDPGAVPRPCCVPTLSPLS 76

RESULT 186
US-10-074-978A-300
; Sequence 300, Application US/10074978A
; Publication No. US20040010119A1
; GENERAL INFORMATION:
; APPLICANT: Leite, Mario
; APPLICANT: Spytek, Kimberly A
; APPLICANT: Guo, Xiaojia (Sasha)
; APPLICANT: Fernandes, Elma
; APPLICANT: Li, Li
; APPLICANT: Kekuda, Ramesh
; APPLICANT: Tchernev, Velizar T
; APPLICANT: Casman, Stacie
; APPLICANT: Boldog, Ferenc
; APPLICANT: Patuzaajan, Meera
; APPLICANT: Blalock, Angela
; APPLICANT: Ballinger, Robert
; APPLICANT: Verneet, Corine
; APPLICANT: Tchernev, Velizar T
; APPLICANT: Malyankar, Uriel M
; APPLICANT: Gusev, Vladimir
; APPLICANT: Rastelli, Luca
; APPLICANT: Mezes, Peter S
; APPLICANT: Elleman, Karen
; APPLICANT: Heyes, Melvin P
; APPLICANT: Herman, John
; APPLICANT: Pena, Carol E A
; APPLICANT: Shimkets, Richard A
; APPLICANT: Taupier, Jr, Raymond J
; APPLICANT: Moore, No. US20040010119A111e
```

APPLICANT: Shenoy, Suresh  
APPLICANT: Eisinger, Shlomit  
APPLICANT: Gunther, Erik  
APPLICANT: Stone, Dave  
APPLICANT: Millet, Isabelle  
APPLICANT: Peyman, John  
APPLICANT: Smithson, Glenda  
TITLE OF INVENTION: NOVEL PROTEINS AND NUCLEIC ACIDS ENCODING SAME  
FILE REFERENCE: 21402-269  
CURRENT APPLICATION NUMBER: US/10/074,978A  
CURRENT FILING DATE: 2003-01-07  
PRIOR APPLICATION NUMBER: 60/268,221  
PRIOR FILING DATE: 2001-02-12  
PRIOR APPLICATION NUMBER: 60/335,109  
PRIOR FILING DATE: 2001-10-31  
PRIOR APPLICATION NUMBER: 60/312,284  
PRIOR FILING DATE: 2001-08-14  
PRIOR APPLICATION NUMBER: 60/268,496  
PRIOR FILING DATE: 2001-02-13  
PRIOR APPLICATION NUMBER: 60/276,703  
PRIOR FILING DATE: 2001-03-16  
PRIOR APPLICATION NUMBER: 60/330,293  
PRIOR FILING DATE: 2001-10-18  
PRIOR APPLICATION NUMBER: 60/332,127  
PRIOR FILING DATE: 2001-11-21  
PRIOR APPLICATION NUMBER: 60/280,899  
PRIOR FILING DATE: 2001-04-02  
PRIOR APPLICATION NUMBER: 60/310,797  
PRIOR FILING DATE: 2001-08-08  
PRIOR APPLICATION NUMBER: 60/268,646  
PRIOR FILING DATE: 2001-02-14  
Remaining Prior Application data removed - See File Wrapper or PALM.  
NUMBER OF SEQ ID NOS: 547  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 300  
LENGTH: 102  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Transforming  
OTHER INFORMATION: growth factor beta like domain sequence  
US-10-074-978A-300  
Query Match 64.9%; Score 72; DB 15; Length 102;  
Best Local Similarity 55.0%; Pred. No. 0.048; 4; Indels 0; Gaps 0;  
Matches 11; Conservative 5; Mismatches 0;  
CY 1 INPETYKPCCAPTOLNAIS 20  
DB 57 LDPGAVPKPCCVPTKLSPLS 76

RESULT 187  
US-10-072-012-831  
Sequence 831, Application US/10072012  
Publication No. US20040033493A1  
GENERAL INFORMATION:  
APPLICANT: Tchernev, Velizar  
APPLICANT: Spytek, Kimberly  
APPLICANT: Zernhusen, Bryan  
APPLICANT: Patturajan, Meera  
APPLICANT: Shimkets, Richard  
APPLICANT: Li, Li  
APPLICANT: Gangoli, Esna  
APPLICANT: Padigaru, Muralidhara  
APPLICANT: Anderson, David W.  
APPLICANT: Rastelli, Luca  
APPLICANT: Miller, Charles E.  
APPLICANT: Gerlach, Valerie  
APPLICANT: Taupier Jr, Raymond J.  
APPLICANT: Gusev, Vladimir Y.  
APPLICANT: Colman, Steven D.  
APPLICANT: Wolenc, Adam R.

APPLICANT: Pena, Carol E. A  
APPLICANT: Furtak, Katarzyna  
APPLICANT: Grosse, William M.  
APPLICANT: Alebrook II, John P.  
APPLICANT: Lepley, Denise M.  
APPLICANT: Rieger, Daniel K.  
APPLICANT: Burgess, Catherine E.  
TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same  
FILE REFERENCE: 21402-258  
CURRENT APPLICATION NUMBER: US/10/072,012  
CURRENT FILING DATE: 2002-01-31  
PRIOR APPLICATION NUMBER: 60/265,102  
PRIOR FILING DATE: 2001-01-30  
PRIOR APPLICATION NUMBER: 60/265,514  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,517  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,412  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,395  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/266,406  
PRIOR FILING DATE: 2001-02-02  
PRIOR APPLICATION NUMBER: 60/266,767  
PRIOR FILING DATE: 2001-02-05  
PRIOR APPLICATION NUMBER: 60/267,057  
PRIOR FILING DATE: 2001-02-07  
PRIOR APPLICATION NUMBER: 60/266,975  
PRIOR FILING DATE: 2001-02-07  
PRIOR APPLICATION NUMBER: 60/267,459  
PRIOR FILING DATE: 2001-02-08  
Remaining Prior Application data removed - See File Wrapper or PALM.  
NUMBER OF SEQ ID NOS: 1391  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 831  
LENGTH: 102  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Transforming  
OTHER INFORMATION: growth factor-beta (TGF-beta) family  
US-10-072-012-831  
Query Match 64.9%; Score 72; DB 15; Length 102;  
Best Local Similarity 55.0%; Pred. No. 0.048; 4; Indels 0; Gaps 0;  
Matches 11; Conservative 5; Mismatches 0;  
CY 1 INPETYKPCCAPTOLNAIS 20  
DB 57 LDPGAVPKPCCVPTKLSPLS 76

RESULT 188  
US-10-072-012-833  
Sequence 833, Application US/10072012  
Publication No. US20040033493A1  
GENERAL INFORMATION:  
APPLICANT: Tchernev, Velizar  
APPLICANT: Spytek, Kimberly  
APPLICANT: Zernhusen, Bryan  
APPLICANT: Patturajan, Meera  
APPLICANT: Shimkets, Richard  
APPLICANT: Li, Li  
APPLICANT: Gangoli, Esna  
APPLICANT: Padigaru, Muralidhara  
APPLICANT: Anderson, David W.  
APPLICANT: Rastelli, Luca  
APPLICANT: Miller, Charles E.  
APPLICANT: Gerlach, Valerie  
APPLICANT: Taupier Jr, Raymond J.  
APPLICANT: Gusev, Vladimir Y.  
APPLICANT: Colman, Steven D.  
APPLICANT: Wolenc, Adam R.



APPLICANT: Pena, Carol E. A  
APPLICANT: Furtak, Katarzyna  
APPLICANT: Grose, William M.  
APPLICANT: Alsbrook II, John P.  
APPLICANT: Lepley, Denise M.  
APPLICANT: Rieger, Daniel K.  
APPLICANT: Burgess, Catherine E.  
TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same  
FILE REFERENCE: 21402-258  
CURRENT APPLICATION NUMBER: US/10/072,012  
CURRENT FILING DATE: 2002-01-31  
PRIOR APPLICATION NUMBER: 60/265,102  
PRIOR FILING DATE: 2001-01-30  
PRIOR APPLICATION NUMBER: 60/265,514  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,517  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,412  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,395  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/266,406  
PRIOR FILING DATE: 2001-02-02  
PRIOR APPLICATION NUMBER: 60/266,767  
PRIOR FILING DATE: 2001-02-05  
PRIOR APPLICATION NUMBER: 60/267,057  
PRIOR FILING DATE: 2001-02-07  
PRIOR APPLICATION NUMBER: 60/266,975  
PRIOR FILING DATE: 2001-02-07  
PRIOR APPLICATION NUMBER: 60/267,459  
PRIOR FILING DATE: 2001-02-08  
Remaining Prior Application data removed - See File Wrapper or PALM.  
NUMBER OF SEQ ID NOS: 1391  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO: 833  
LENGTH: 102  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Transforming  
OTHER INFORMATION: Growth factor-beta (TGF-beta) family  
US-10-072-012-833

Query Match 64.9%; Score 72; DB 15; Length 102;  
Best Local Similarity 55.0%; Pred. No. 0.048; 4; Indels 0; Gaps 0;  
Matches 11; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNALS 20  
Db 57 LDGAVPRKCCVPTKLSPLS 76

RESULT 189  
US-08-260-675-8  
Sequence 8, Application US/08260675  
Publication No. US20030104993A1  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C  
APPLICANT: KUBERSAMPATH, THANGAVEL  
APPLICANT: OPPERHANN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: PANG, ROY HU  
APPLICANT: COHEN, CHARLES M  
TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
TITLE OF INVENTION: REPAIR  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA HURWITZ & THIBEAULT  
STREET: 55 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02140

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/260,675  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/126,100  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/07/922,813  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-070  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 8:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: Protein  
ORIGINAL SOURCE:  
ORGANISM: MURIDAE  
TISSUE TYPE: EMBRYO  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /label= WOP2-MATURE  
US-08-260-675-8

Query Match 64.9%; Score 72; DB 8; Length 139;  
Best Local Similarity 60.0%; Pred. No. 0.065; 4; Indels 0; Gaps 0;  
Matches 12; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNALS 20  
Db 94 MKPDVPRKACAPTKLSATS 113

RESULT 190  
US-09-952-318A-8  
Sequence 8, Application US/09952318A  
Publication No. US20030224979A1  
GENERAL INFORMATION:  
APPLICANT: KUBERSAMPATH et al.  
TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR INCREASE BONE MASS IN  
TITLE OF INVENTION: METABOLIC BONE DISEASE  
FILE REFERENCE: JUD-P06-522  
CURRENT APPLICATION NUMBER: US/09/952,318A  
CURRENT FILING DATE: 2001-09-13  
PRIOR APPLICATION NUMBER: 09/170,936  
PRIOR FILING DATE: 1998-10-13  
PRIOR APPLICATION NUMBER: 08/432,883  
PRIOR FILING DATE: 1995-05-02  
PRIOR APPLICATION NUMBER: 08/115,914  
PRIOR FILING DATE: 1993-09-01  
PRIOR APPLICATION NUMBER: 07/923,780  
PRIOR FILING DATE: 1992-07-31  
PRIOR APPLICATION NUMBER: 07/752,847

PRIOR FILING DATE: 1991-08-30  
PRIOR APPLICATION NUMBER: 07/667,274  
PRIOR FILING DATE: 1991-03-11  
NUMBER OF SEQ ID NOS: 33  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO: 8  
LENGTH: 139  
TYPE: PRT  
ORGANISM: Mus musculus  
US-09-952-318A-8

Query Match 64.9%; Score 72; DB 10; Length 139;  
Best Local Similarity 60.0%; Pred. No. 0.065;  
Matches 12; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 INPETHPCCAPTOLNALS 20  
DB 94 MKPDVPRKACCAPTOLNALS 113

RESULT 191  
US-10-050-050-8  
Sequence 0, Application US/10050050  
Publication No. US20030125230A1

GENERAL INFORMATION:

APPLICANT: COHEN, CHARLES M.  
CHARRETTE, MARC F.  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
OPPERMANN, HERMANN  
PANG, ROY H.L.  
OKAYNAK, ENGIN  
SMART, JOHN E.

TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING  
PROLIFERATION OF EPITHELIAL CELLS.

NUMBER OF SEQUENCES: 33

CORRESPONDENCE ADDRESS:

ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES

STREET: 45 SOUTH STREET

CITY: HOPKINTON

STATE: MA

COUNTRY: USA

ZIP: 01748

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/10/050,050

FILING DATE: 15-Jan-2002

CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/461,113

FILING DATE: <Unknown>

APPLICATION NUMBER: US 08/445,882

FILING DATE: 22-MAY-1995

ATTORNEY/AGENT INFORMATION:

NAME: FENTON ESQ., GILLIAN M.

REGISTRATION NUMBER: 36,508

REFERENCE/DOCKET NUMBER: CRP-074DV

TELECOMMUNICATION INFORMATION:

TELEPHONE: (508) 435-9001

TELEFAX: (508) 435-6951

INFORMATION FOR SEQ ID NO: /note= "MOP-2 (MATURE FORM)"

SEQUENCE CHARACTERISTICS:

LENGTH: 139 amino acids

TYPE: amino acid

STRANDEDNESS: single

MOLECULE TYPE: linear

FEATURE:

NAME/KEY: Protein

LOCATION: 1..139  
SEQUENCE DESCRIPTION: SEQ ID NO: 8:  
US-10-050-050-8

Query Match 64.9%; Score 72; DB 14; Length 139;  
Best Local Similarity 60.0%; Pred. No. 0.065;  
Matches 12; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 INPETHPCCAPTOLNALS 20  
DB 94 MKPDVPRKACCAPTOLNALS 113

RESULT 192  
US-10-385-064-8

Sequence 8, Application US/10385064

Publication No. US20040102373A1

GENERAL INFORMATION:

APPLICANT: COHEN, CHARLES M.

APPLICANT: KUBERASAMPATH, THANGAVEL

APPLICANT: RUEGER, DAVID C.

APPLICANT: OPPERMANN, HERMANN

TITLE OF INVENTION: Protein induced Morphogenesis

FILE REFERENCE: GEN-2 DIV. (00960-502 DIV)

CURRENT FILING DATE: 2003-03-10

PRIOR APPLICATION NUMBER: US/10/385,064

PRIOR FILING DATE: 1999-12-15

PRIOR APPLICATION NUMBER: 08/396,684

PRIOR FILING DATE: 1995-03-01

NUMBER OF SEQ ID NOS: 16

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO: 8

LENGTH: 139

TYPE: PRT

ORGANISM: Murinae gen. sp.

FEATURE:

OTHER INFORMATION: tissue type embryo MOP2-MATURE

US-10-385-064-8

Query Match 64.9%; Score 72; DB 16; Length 139;  
Best Local Similarity 60.0%; Pred. No. 0.065;  
Matches 12; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 INPETHPCCAPTOLNALS 20  
DB 94 MKPDVPRKACCAPTOLNALS 113

RESULT 193  
US-08-957-425-27

Sequence 27, Application US/08957425

Publication No. US20030069401A1

GENERAL INFORMATION:

APPLICANT: OPPERMANN, HERMANN

OKAYNAK, ENGIN

KUBERASAMPATH, THANGAVEL

RUEGER, DAVID C.

PANG, ROY H.L.

TITLE OF INVENTION: OSTEOGENIC DEVICES

NUMBER OF SEQUENCES: 33

CORRESPONDENCE ADDRESS:

ADDRESSEE: TESTA, HURWITZ & THIBEAULT

STREET: 53 STATE STREET

CITY: BOSTON

STATE: MASSACHUSETTS

COUNTRY: U.S.A.

ZIP: 02109

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/957,425
FILING DATE: 24-Oct-1997
CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/447,570
FILING DATE: 21-FEB-1992
APPLICATION NUMBER: US 810,560
FILING DATE: 20-DEC-1991
APPLICATION NUMBER: US 827,052
FILING DATE: 28-JAN-1992
APPLICATION NUMBER: US 660,162
FILING DATE: 22-FEB-1991
APPLICATION NUMBER: US 621,988
FILING DATE: 04-DEC-1990
APPLICATION NUMBER: US 621,849
FILING DATE: 04-DEC-1990
APPLICATION NUMBER: US 616,374
FILING DATE: 21-NOV-1990
APPLICATION NUMBER: US 600,024
FILING DATE: 18-OCT-1990
APPLICATION NUMBER: US 599,543
FILING DATE: 18-OCT-1990
APPLICATION NUMBER: US 579,865
FILING DATE: 07-SEP-1990
APPLICATION NUMBER: US 569,920
FILING DATE: 20-AUG-1990
APPLICATION NUMBER: US 483,913
FILING DATE: 22-FEB-1990
APPLICATION NUMBER: US 422,613
FILING DATE: 17-OCT-1989
APPLICATION NUMBER: US 315,342
FILING DATE: 23-FEB-1989
APPLICATION NUMBER: US 232,630
FILING DATE: 15-AUG-1988
APPLICATION NUMBER: US 179,460
FILING DATE: 08-APR-1988

ATTORNEY/AGENT INFORMATION:
NAME: PITCHER, EDMUND R.
REGISTRATION NUMBER: 27,829
REFERENCE/DOCKET NUMBER: CRP-001CP6
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617/248-7000
TELEFAX: 617/248-7100

INFORMATION FOR SEQ ID NO: 27:
SEQUENCE CHARACTERISTICS:
LENGTH: 399 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 27:
US-08-957-425-27

Query Match      64.9% Score 72 DB 8 Length 399
Best Local Similarity 60.0% Pred.No.0.18;
Matches 12; Conservative 4; Mismatches 4; Indels 0; Gaps 0

QY      1 INETVPKPCCAPTOLNAIS 20
       :|:|||||||:|:|
Db      354 MKPDVVPKACCAPTLSATS 373

RESULT 194
US-08-260-675-23
Sequence 23, Application US/08260675
Publication No. US20030104993A1
GENERAL INFORMATION:
APPLICANT: RUEGER, DAVID C
APPLICANT: KUBERSASAMPATH, THANGAVEL
APPLICANT: OPPERMAN, HERMANN
APPLICANT: OKAYNAR, ENGILN
APPLICANT: PANG, ROY HL
APPLICANT: COHEN, CHARLES M

```

```

TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND REPAIR
TITLE OF INVENTION:
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
ADDRESSEE: TESTA HURWITZ & THIBEAULT
STREET: 55 STATE STREET
CITY: BOSTON
STATE: MA
COUNTRY: USA
ZIP: 02140
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/260,675
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/126,100
FILING DATE:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/922,813
FILING DATE:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/667,274
FILING DATE: 11-MAR-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/752,764
FILING DATE: 30-AUG-1991
ATTORNEY/AGENT INFORMATION:
NAME: PITCHER ESO, EDMUND R
REGISTRATION NUMBER: 27,829
REFERENCE/DOCKET NUMBER: CRP-070
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617/248-7000
TELEFAX: 617/248-7100
INFORMATION FOR SEQ ID NO: 23:
SEQUENCE CHARACTERISTICS:
LENGTH: 399 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-260-675-23

Query Match          64.9%; Score 72; DB 8; Length 399;
Best Local Similarity 60.0%; Pred. No. 0.18;
Matches 12; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY      1 INPEIVPKPCACPTQJNLAIS 20
       :|::|||::|::|::|::|::|
Db      354 MKPDVVPRKACCAPTKLSTATS 373

RESULT 195
US-09-952-318A-23
; Sequence 23, Application US/09952318A
; Publication No. US20030224979A1
GENERAL INFORMATION:
APPLICANT: Kuberanpath et al.
TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR INCREASE BONE MASS IN
FILE REFERENCE: JUU-P06-522
CURRENT APPLICATION NUMBER: US/09/952,318A
PRIOR FILING DATE: 2001-09-13
PRIOR APPLICATION NUMBER: 09/170,936
PRIOR FILING DATE: 1998-10-13
PRIOR APPLICATION NUMBER: 08/432,883
PRIOR FILING DATE: 1995-05-02
PRIOR APPLICATION NUMBER: 08/115,914
PRIOR FILING DATE: 1993-09-01
PRIOR APPLICATION NUMBER: 07/923,780

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PRIOR FILING DATE: 1992-07-31  
PRIOR APPLICATION NUMBER: 07/752,847  
PRIOR FILING DATE: 1991-08-30  
PRIOR APPLICATION NUMBER: 07/667,274  
PRIOR FILING DATE: 1991-03-11  
NUMBER OF SEQ ID NOS: 33  
SOFTWARE: Patentin version 3.1  
SEQ ID NO: 23  
LENGTH: 399  
TYPE: PRT  
ORGANISM: Mus musculus  
US-09-952-318A-23

Query Match 64.9%; Score 72; DB 10; Length 399;  
Best Local Similarity 60.0%; Pred. No. 0.18;  
Matches 12; Conservative 4; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPPTOLNALS 20  
DB 354 MKPDVVPKACCAPTKLSATS 373

RESULT 196  
US-10-122-026-8  
Sequence 8, Application US/10122026  
Publication No. US20030105004A1  
GENERAL INFORMATION:

APPLICANT: JONES, WILLIAM K  
TUCKER, RONALD F  
RUEGER, DAVID C  
OPPERMANN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL

TITLE OF INVENTION: NOVEL MORPHOGENIC PROTEIN COMPOSITIONS  
OF MATTER

NUMBER OF SEQUENCES: 23  
CORRESPONDENCE ADDRESSES:

ADDRESSEE: Patent Administrator, Testa, Hurwitz &  
Thibault, LLP

STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110

COMPUTER READABLE FORM:

MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/10/122,026  
FILING DATE: 29-AUG-2002

CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/402,542  
FILING DATE: 13-MAR-1995

APPLICATION NUMBER: US 08/840,510  
FILING DATE: 31-MAR-1993

APPLICATION NUMBER: US 08/029,335  
FILING DATE: 04-MAR-1993

APPLICATION NUMBER: US 07/971,091  
FILING DATE: 03-NOV-1992

APPLICATION NUMBER: US 07/946,235  
FILING DATE: 16-SEP-1992

APPLICATION NUMBER: US 07/938,336  
FILING DATE: 26-AUG-1992

APPLICATION NUMBER: US 07/923,780  
FILING DATE: 31-JUL-1992

APPLICATION NUMBER: US 07/752,857  
FILING DATE: 30-AUG-1991

APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991

APPLICATION NUMBER: US 07/667,274

FILING DATE: 11-MAR-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: CAMACHO, JENNIFER A.  
REGISTRATION NUMBER: 43,526  
REFERENCE/DOCKET NUMBER: STK-060CN  
INFORMATION FOR SEQ ID NO: 8:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 399 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 8:  
US-10-122-026-8

Query Match 64.9%; Score 72; DB 14; Length 399;  
Best Local Similarity 60.0%; Pred. No. 0.18;  
Matches 12; Conservative 4; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPPTOLNALS 20  
DB 354 MKPDVVPKACCAPTKLSATS 373

RESULT 197  
US-10-050-050-23  
Sequence 23, Application US/10050050  
Publication No. US20030125230A1  
GENERAL INFORMATION:

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CHARETTE, MARC F.  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
OPPERMANN, HERMANN  
PANG, ROY H.L.  
OZKAYNAK, ENGIN  
SMART, JOHN E.

TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING  
PROLIFERATION OF EPITHELIAL CELLS.

NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESSES:

ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES

STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748

COMPUTER READABLE FORM:

MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/10/050,050  
FILING DATE: 15-JAN-2002

CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/461,113  
FILING DATE: <Unknown>

APPLICATION NUMBER: US 08/445,882  
FILING DATE: 22-MAY-1995

ATTORNEY/AGENT INFORMATION:  
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REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-074DV

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INFORMATION FOR SEQ ID NO: 23:

SEQUENCE CHARACTERISTICS:  
LENGTH: 399 amino acids  
TYPE: amino acid  
TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 23;  
US-10-050-050-23

Query Match 64.9%; Score 72; DB 14; Length 399;  
Best Local Similarity 60.0%; Pred. No. 0.18;  
Matches 12; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLN1S 20  
Db 354 MKPDVVPKACCAPTKLSATS 373

RESULT 198

US-10-350-747-2  
Sequence 2, Application US/10350747  
Publication No. US20030153072A1  
GENERAL INFORMATION:

APPLICANT: Hogan, Brigid L.M.  
TITLE OF INVENTION: Compositions and Methods of Making  
Embryonic Stem Cells

NUMBER OF SEQUENCES: 4  
CORRESPONDENCE ADDRESSES:

ADDRESSEE: Panitch Schwarze Jacobs & Nadel, P.C.  
STREET: 1601 Market Street, 36th Floor  
CITY: Philadelphia  
STATE: Pennsylvania  
COUNTRY: USA  
ZIP: 19103-2398

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/10/350,747  
FILING DATE: 24-Jan-2003  
CLASSIFICATION: 435

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/808,346  
FILING DATE: 28-FEB-1997

ATTORNEY/AGENT INFORMATION:  
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REGISTRATION NUMBER: 36,317

REFERENCE/DOCKET NUMBER: 9823-1  
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TELEX: 831-494  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:

LENGTH: 399 amino acids  
TYPE: amino acid  
STRANDEDNESS: single

TOPOLOGY: linear  
MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-10-350-747-2

Query Match 64.9%; Score 72; DB 14; Length 399;  
Best Local Similarity 60.0%; Pred. No. 0.18;  
Matches 12; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLN1S 20  
Db 354 MKPDVVPKACCAPTKLSATS 373

RESULT 199

US-10-321-799-27  
Sequence 27, Application US/10321799  
Publication No. US2003022496A1  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN

OZKANAK, ENGIN  
KUBERASAMPATE, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.

TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESSES:

ADDRESSEE: TESTA, HURNITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/321,799  
FILING DATE: 17-Dec-2002

CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 09/148,925  
FILING DATE: 8-SEP-1998  
APPLICATION NUMBER: US 08/449,699

FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993

APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052

FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990

APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988

FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991

APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024

FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990

APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913

FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988

APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342

FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991

APPLICATION NUMBER: US 07/422,659  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613

FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989

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REFERENCE/DOCKET NUMBER: STK-001CB6C3  
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INFORMATION FOR SEQ ID NO: 27:

Search completed: October 26, 2004, 07:52:17  
Job time : 50 secs